

December 2025

Fogmaker News

Technical and market-related information for our partners

**Important Eco 1
Updates**

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FOGMAKER
INTERNATIONAL AB

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Lars Alrutz, CEO
Fogmaker International AB.

A word from the CEO

Soon it will be 2026, and as always most of us get some time off to reflect on this year and to spend time with friends and family. 2025 has been a bit of a rollercoaster on the global scene, and we can only hope for stability going forward.

Fogmaker, together with many of our partners, have had a tougher year than expected. Many of you have taken market shares, but the machine market has been tough for all of us. The forced change of liquid took energy from the organization, but I think it was handled the only way we could. And now, seeing the new legislation that has been set, I am happy we took the transition as early as possible. Thanks for your support and understanding in this issue.

It's great to announce both a new Partner Portal and the Partner days in 2026. I really look forward to seeing all of you here in Sweden. And speaking about the Partner Portal, I must remind you all to report

fires into the portal or directly to Gustav Stigsohn. Why is this so important? The more proof we can show the customers of our efficient system, the easier it will be to convince them to buy Fogmaker. We know that the system is superior in many ways, but hard facts is the best seller, so please do all you can to support Gustav in this matter.

Finally, I would like to welcome all of the new Partners that we started up during the year. I really look forward to seeing what we can accomplish together.

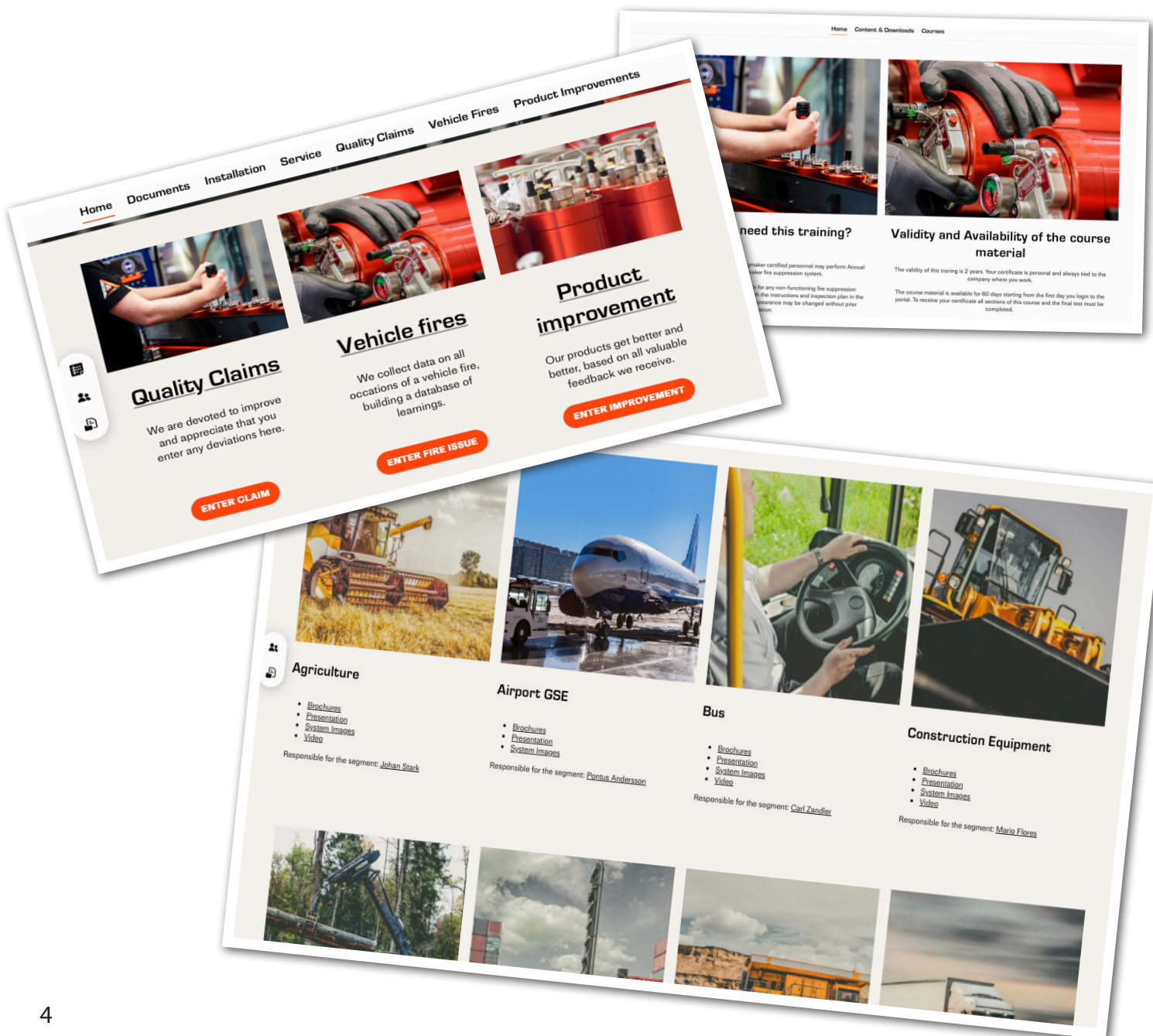
Merry Christmas and a Happy New Year!

Lars

Coming Soon: New Partner Portal

In 2026, Fogmaker International AB will launch a new portal designed to strengthen support for our global network. The platform will serve as a hub that provides access to technical documentation, training materials, marketing resources, forms for claims, and other information.

Our intention is to provide a system that is more user friendly and inspiring than the current one. The first organizations will get access to test-drive shortly, and our hope is that all Fogmaker partners will be set up around the time of the 2026 partner conference. More information coming soon!



SAVE THE DATE

May 26-28

2026 Partner Days

Circle May 26-28, 2026, in your calendar - this will be the next instance of Fogmaker's popular Partner Days.

The schedule isn't finalized, but we are aiming for a mix of useful information, cooperation, and fun. Don't miss this opportunity to visit us in Sweden, get a first look at product news, tips for business development, and much more! Keep an eye on your mailbox: details and formal invitation will be distributed during spring.



1831 to Eco 1 Updates

Upcoming REACH Regulation Update: PFAS Restrictions in Firefighting Foam

The European REACH regulation (EC 1907/2006) has recently been updated to address the use of PFAS (per- and polyfluoroalkyl substances) in firefighting foams.

According to the REACH regulation, all firefighting foam containing PFAS at concentrations above 1 mg/L will be banned from October 23rd, 2030. Fogmaker's Extinguishant -35°C [1831], contains PFAS in a concentration above the limitation (2 g/L or 0.02% or 200 ppm).

Beyond usage restrictions, the regulation introduces strict requirements for product labelling, waste management and action plans for accidental leakage and phase-out of PFAS.

From October 23, 2026, all products containing PFAS mixtures must carry specific hazard markings, and disposal must follow designated procedures to prevent environmental contamination.

According to the REACH regulation, there is an exception for equipment that has been cleaned in accordance with the best available techniques. The concentration of PFAS shall not exceed 50 mg/L. To reach the below-limit of PFAS in reused piston accumulators, the PA's need to be washed with water and the pump can only be used with Eco 1. Fogmaker has measured the concentration of PFAS in many different washing scenarios, but it is important to understand that the analysis for PFAS substances is continuously improved and the results may vary if performed over different time periods.

These changes will require proactive planning. Fogmaker urges all partners, again, to start the transition to solutions that comply with the new standards, so that 5-year service and the replacement of PFAS are carried out before legislation comes into force.



Thank You to our Partners

The past year has been challenging for Fogmaker, particularly in connection with the transition from PFAS to the Eco1 liquid. This change has required new ways of working, operational adjustments, and decisions to be made under time pressure.

Despite these challenges, our partners have demonstrated strong commitment, professionalism, and understanding throughout the entire process. Together, we have addressed the challenges in a constructive manner, with collaboration and with a long-term perspective.

One example is our partner PSV Transport Systems in the UK, who made an early decision to fully transition to Eco1 for both new installations and service operations. Their swift actions and clear commitment highlight the strength of our partnerships and our shared determination to drive development forward. We are proud of the work carried out over the past year and look forward to continuing to build on the solid foundation that has now been established.

Finally, we would like to extend our sincere thanks to all our partners for their hard work together with their customers and for the dedication that has made the transition to Eco1 possible.

Pontus Andersson
Partner Manager Europe

What is PFAS?

PFAS, also known as high fluorine substances, are a group of chemicals that repel fats, dirt, and water. There are thousands of PFAS chemicals on the market, used in everything from frying pans to beauty products - and fire suppression products.

PFAS chemicals are stable chemical compounds that remain in nature for a long time, and many PFAS compounds break down very slowly or not at all. These chemicals can also be bioaccumulating, which means they build up in animals and people.



The Power of 100+

Inside Nagendra Ruthala's Fogmaker Journey

With more than 100 Fogmaker installations, Nagendra Ruthala is probably the most experienced Fogmaker technician in India. He has played a key role in strengthening Fogmaker's presence in the region and ensuring high-quality protection of lives and investments. Here is what he has to say:

Q: How long have you worked with Fogmaker?

I have been working with Instinctual for over seven years now, and Fogmaker has been a core part of that journey. You could say that for the better part of a decade, I've been working on Fogmaker systems by studying the 'anatomy' of these machines to learn exactly how to protect them best.

Q: I've heard that you've made more than 100 Fogmaker installations. That's impressive. How many are you at now?

The count is currently standing at 118. However, to me, these are 118 distinct 'shields' deployed in the field. Every installation is a new layer of security added to the fleet, and I'm ready for the next one.

Q: Do you have a favorite type of machine to work with?

I actually prefer the ones that put up a fight - the complex puzzles. The Komatsu WA600 wheel loader is a favorite of mine exactly because it was so challenging. It is a massive, complex piece of equipment with tight spaces and intricate layouts. Fitting the system onto that was like tailoring a suit of armor for a giant; it had to be precise to work perfectly. The difficult installations are the most rewarding to complete.

Q: What do you think is the most fun with the job?

For me, it goes deeper than just the mechanics; it is about being a guardian. My passion lies in protecting the things that matter most - the human lives operating the equipment and the valuable equipment itself. The best moment isn't finishing the installation, but later, when I hear that a machine I worked on was saved from a fire. Knowing that the 'shield' we built held up and everyone went home safe - that brings me the greatest happiness.

Thank you Nagendra, keep up the good work!



Move to Monitor

January 26, 2026 will be a big day for Fogmaker International AB: we are switching our ERP (Enterprise Resource Planning) system from SAP to Monitor. While every effort has been made to ensure a smooth changeover, there may be minor disruptions during the transition.



The ERP system is the backbone of Fogmaker International's daily operations, supporting everything from purchasing and logistics to production and delivery.

Monitor is built for manufacturing companies, with a strong emphasis on production planning, transparency, and scalability. This makes it a better fit for our operations as we continue to grow. During 2025, we have worked on structuring and cleaning up our data to fit the new system.

There may be interruptions in placing orders, getting order acknowledgements, and similar during the days around the switch. After the switch, you may notice that some documents look different than before. Your contact persons at Fogmaker International will remain the same.

We hope for your understanding and patience as we make this important move.



FOGMAKER *STRENGTHENS EV FIRE PROTECTION*

Carl Zandler, Segment Sales Manager for Commercial Vehicles at Fogmaker International, explores how its latest fire suppression innovation enhances safety and evacuation time in BEV fires



The transition to battery electric vehicles (BEVs) is transforming commercial transport, cutting emissions and operating costs. Yet one question remains at the heart of safety discussions: what if a fire breaks out?

While the likelihood of a BEV fire is low, the consequences are severe. Once thermal runaway begins, temperatures escalate rapidly, releasing toxic gases and flames that can engulf a vehicle within minutes. Passengers and drivers have precious little time to act.

Fogmaker's latest innovation directly tackles this risk. The company's new Sectioning Deployment Valve delivers precise, targeted suppression, buying vital seconds that can mean the difference between a safe evacuation and disaster.

TARGETED SUPPRESSION ACROSS MULTIPLE ZONES

Traditional fire suppression systems are often limited to a single protected compartment. Fogmaker's new design changes that. The Sectioning Deployment Valve allows one central suppression unit to serve multiple critical zones such as battery packs, engine bays or auxiliary systems, within the same vehicle.

When sensors detect heat or smoke, the valve automatically channels the Fogmaker Eco 1 suppression agent to the affected compartment. A single unit protecting a 1m³ area can sustain up to two minutes of suppression, holding back flames and cooling hotspots. That sustained action can slow fire progression long enough for passengers to exit and emergency services to respond.

THE SCIENCE BEHIND FOGMAKER ECO 1

All fires rely on the same chemistry: heat, fuel and oxygen. Fogmaker's Eco 1 agent neutralises each element of this 'fire triangle' through three coordinated mechanisms.

Firstly, rapid cooling: The agent's water base absorbs

heat exceptionally efficiently. Dispersed at 105 bar pressure into ultra-fine droplets, it achieves massive surface area contact with hot gases, absorbing thermal energy in seconds.

Secondly, oxygen displacement: Each droplet expands up to 1,700 times its volume when vaporising, displacing oxygen around the fire zone. This suffocates the reaction without damaging surrounding components.

Lastly, chemical interruption: Eco 1 includes a PFAS-free foam additive and potassium salts that bind with free radicals, breaking the self-sustaining chain reaction of combustion.

Together, these processes halt fire development at the molecular level. Unlike inert gas or powder systems, Fogmaker actively cools and chemically stabilises the environment, preventing reignition.

INDEPENDENT AND ALWAYS OPERATIONAL

Reliability in critical moments defines Fogmaker's approach. The system operates entirely independently from the vehicle's electrical circuits. The suppression unit remains under 105 bar static pressure, triggered mechanically via loss-of-pressure activation through Fogmaker's patented high-pressure spray nozzles.

This autonomy ensures performance even during a total power failure. The mist is water-based yet non-conductive, providing safe operation in high-voltage environments, a critical feature for electric fleets and depot storage areas.

CLOSING THE SAFETY GAP

High-profile BEV fire incidents have heightened awareness among fleet operators, insurers and regulators. The challenge lies in bridging the time between ignition and evacuation. Fogmaker's new solution delivers that bridge.

By combining advanced suppression science with compartment-specific targeting, it transforms evacuation safety for electric buses, trucks and industrial vehicles **FB**

New Heavy-Duty Alarm Panel - Available Now

Fogmaker proudly introduces the next-generation Heavy Duty Alarm Panel (HD-AP), engineered for the toughest environments and ready for delivery today. Designed specifically for demanding applications such as mining, material handling, and construction equipment, the HD-AP has undergone rigorous testing to guarantee long-term reliability. **Corrosion, vibration, shock, EMC, IP rating, temperature, and humidity tests have all been successfully completed.**

The panel is also scheduled for testing according to FM 5970 and AS 5062, making it an excellent choice for customers in the American and Australian markets.

Smarter Service – Built-In Maintenance Reminders

A standout new feature is the integrated service reminder. After 3, 6, or 12 months, the panel alerts the operator that it's time for the annual inspection. The technician sets the interval during installation — no special tools required. This ensures the Fogmaker system receives the maintenance it needs to perform at its best.

Enhanced Safety – Continuous System Supervision

To further increase safety, the HD-AP continuously monitors the wiring to the signal module and pressure switches for wire-to-wire shorts. The required resistors are included in the kit and are plug-and-play with our standard switches.

Reliable Operation – Even Without Machine Power

The HD-AP features a built-in backup battery that ensures the operator is alerted even if the machine loses power. The battery is easy to replace when needed. Additional highlights include:

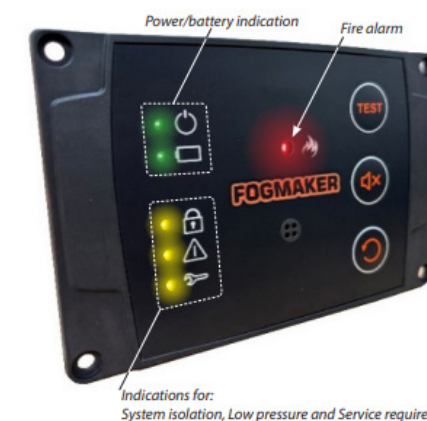
- IP65 rating
 - Multiple outputs for external options
 - CAN bus support
 - Rugged plastic encapsulation to minimize EMC interference
- And importantly, the HD-AP contains no lithium-ion batteries, which simplifies shipping and reduces costs.

Complete Installation Kit

The HD-AP is delivered as a complete kit including the alarm panel, bracket, resistors, wiring, extra connectors, and installation instructions.

Part number: 1748-072

For more information, please contact your sales representative.



Important Notes and Product News

Novec is Discontinued by 3M™

Important reminder: Novec™ 1230 from 3M™ will be discontinued by end of this year, which means Fogmaker will not be able to offer the products starting with PN 1007 or 1008.

There are alternative fire suppression methods that could replace Novec™ 1230 in most applications. For instance, Fogmaker Novec™-system used in diesel heater compartments can be replaced with Fogmaker MiniFSS Eco 1.

There are cases where Fogmaker will not be able to supply a replacement product, and we are looking into different options. Contact your account manager to discuss possible solutions.

Corrective Action: Application of Loctite on Gas Filling Valve 3140

Due to quality problems - leakage from the gas filling valve [3140] - Fogmaker has decided to apply Loctite to the valve threads. The issue has been seen for a long time, albeit in a low frequency, and our investigation shows that applying Loctite helps us achieve the desired level of quality.

Updated Price List

The updated price list for Q1, 2026, has been distributed and is valid from February 1. It is important to always refer to the most recent version to ensure using the correct part numbers.

If you have questions, contact us at order@fogmaker.com



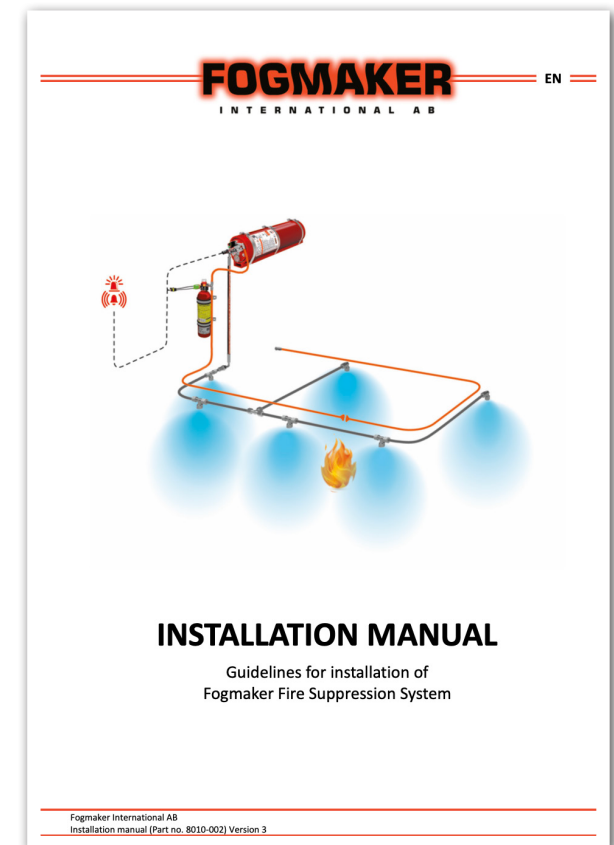
Updated Manuals

A number of manuals have been updated. For now, they are available in English. Translations will become available in January.

- Annual inspection manual version 3
 - Annual Inspection Checklist
- 5-year Service manual version 4
 - 5-year Service Checklist
- 10-year Service manual version 2
 - 10-year Service Checklist
- Installation manual version 3
- OEM installation manual version 2

Installation Certificate and Risk Assessments are unchanged.

Please note, all service checklists have a page 2 that lists all items needed for the inspection or service.



New Alarm Unit for Bus and Truck

Fogmaker introduces a redesigned alarm unit for bus and truck. The new alarm is designed to be easier and faster to install.

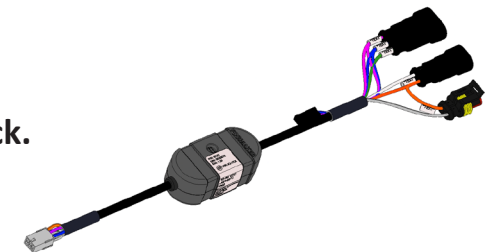
Key Improvements

- Streamlined installation — No screw terminals, no crimping or cutting connectors
- Slim, in-line cable design — Easier routing and cleaner mounting
- Integrated buzzer — Built directly into the unit for compact functionality
- Grooves for zip-ties — Secure and tidy fastening
- Clearly labeled connectors — Minimizes installation errors and speeds up service
- IP40 rating
- Updated relay configuration
 - Normally Open output on AMP connector
 - Normally Closed output function removed

Product Transition

All 1747-020 variants will be replaced by the new 1747-030 model.

The new alarm unit is available for purchase. The availability of the older 1747-020-variants are limited due to obsolete electrical components. A swift transition is recommended.



2026 Trade Shows

We are busy planning Fogmaker's 2026 trade show participation, and this is the preliminary list. As always, partners are encouraged to join us in the stand. Don't forget to get in touch with us if you need some form of support at a trade show.

February 4-5	Breakbulk Middle East, Dubai
February 9-12	Mining Indaba, South Africa
March 26-26	Logimat, Stuttgart, Germany
April 15-16	Bus2Bus, Berlin, Germany
May 19-21	TOC Europe, Hamburg, Germany
June 1-6	Interschutz, Hannover, Germany
Sept 15-20	IAA, Hannover, Germany
Sept 28-Oct 1	Bauma Conexpo, Dehli, India
October 20-22	TOC Americas, Cartagena, Colombia
October 20-22	Persontrafikmässan, Stockholm, Sweden
November 10-12	TOC Asia, Singapore



Mario Flores, Maria Stillman, and Peter Andersson at BAUMA in 2025.

New Look for Fogmaker Nordic's Vehicles

We have updated the design for Fogmaker Nordic's vehicles to make them even more visible on the road and when visiting clients.

If you would like to do something similar, don't hesitate to contact marketing@fogmaker.com for images and ideas. (We may not be able to provide print-ready files for each make and model of car.)



New Face at Fogmaker

Holger Pfriem

I was born in East Germany in 1964 and grew up during the cold war. After the fall of the Berlin-Wall, I started to explore the world as a new-educated lawyer and backpacker. I moved to Sweden in 1990 and went through many different types of jobs before finding my way to the world of fire suppression.

I started working with DAFO in 2004, and put my efforts into building the international market. Later, I worked as an Export Manager and have global experience from OEM customers, end customers, and partners. I also served as CEO of Dafo Asia in Kuala Lumpur. After 18 years with Dafo, I switched to FLIDAR offshore projects in Asia, and now I'm here at Fogmaker as a Key Account Manager.

I am happy to be a part of the Fogmaker team and I appreciate the warm welcome and friendly co-workers. To begin with, I will take care of customers in Africa and more areas of responsibility will be added shortly. This is an exciting challenge and opportunity, and I can't wait to meet all of you.

/Holger



A Fond Farewell and Good Luck

Almost every Fogmaker partner around the world has been in contact with Fogmaker's trainer, Martin Lindblom, at some point in time. After an impressive 18 years with the company, he has accepted a position as trainer with another Värxjö-based industry.

Martin has been paramount in the process of designing partner trainings and he will be missed. We say Thank You for all these years of dedicated service, and wish him the very best for the future.

Finding Martin's replacement will be a process, but don't worry - representatives from System Design and Support will be available to help out in the meantime.



Ida Bellander and Martin Lindblom

**Happy
Holidays**
from the
**Sales and Marketing
Department**





Winter Holiday

Fogmaker International AB will have
limited capacity for the holiday season,
December 23 - January 6

Please plan accordingly.

Happy Holidays!

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