



The Obel-P Group is characterized by innovation, quality and tailor made solutions, which improve our clients' effectiveness, as well as our long-term customer relationship.

Obel-P Group guides the customer through the entire value chain

All 3 Obel-P Group companies are practicing on the basis of a strong skill set and long-standing experiences. With Brødbæk & Co. A/S, Aagaard A/S and Obel-P Automation A/S as a cooperation partner, our customers can achieve solutions, which handle the logs throughout the sawmill to the secondary processing and onto the end product

Obel-P Group is total supplier of solutions for wood processing. The main objective of the group is to develop solutions, which increase the customers' effectiveness and competitive position, whether the customers are working with one or more of the companies within the Obel-P.

Total supplier

"Our strategy is that we, the Obel-P group of companies are the customers' preferred supplier. Consequently we aim to supply solutions and machinery according to the timber processing and value chain within wood machining" declares Leif Dam, Managing Director at Brødbæk & Co. A/S. "We develop solutions for the sawmills to handle fresh sawn wood; our sister companies Aagaard A/S and Obel-P Automation A/S offer customized solutions for the further transformation into for example joinery or furniture products".

Synergy - an evidence of security

"Major wood machining customers, for example IKEA Industry might bring all our qualifications

within the Obel-P Group into play", states Thomas Gaardbo, Managing Director at Aagaard A/S. "The customers benefit from the synergy between the Obel-P companies, and the stability and security from Obel-P Group as the one and only supplier".

Ivan Madsen, Sales Manager at Obel-P Automation A/S stated, "Additional sales of solutions from the sister companies are a positive result of the group community, for example Inwido, one of the most important Scandinavian producers of windows and doors, to whom Aagaard A/S supplied the painting machinery for the components. Obel-P Automation A/S equipment will fit the clips, hinges, brackets and locks to the individual components creating the finished product.

Ongoing development of the Obel-P Group

The three companies agree that the synergy among them must be developed further in the coming years. "We all possess long-term experience and strong qualifications, and together we can provide solutions, which not only meet but usually surpass the advanced demands within the timber industry", Leif Dam, Thomas Gaardbo and Ivan Madsen agree. "The Obel-P Group is characterised by innovation, quality and solutions, which improve the customer's effectiveness. Long-term customer relations drive these qualifications, which must be upheld and developed in the years to come".



Side by side with Obel-P Group you are in a strong position

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An automatic insertion of glass belt and sealings is timesaving in production and quality improving

Read page 3



A new production line at BSW Timber is adding value and increasing the productivity performance

Read page 4



A maximum uptime thanks to Aagaard's new service concept

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EDITORIAL

By Board Chairman of Obel-P Group,
Asbjørn Thomsen

Visit Obel-P Group at the LIGNA show 2015

The Ligna show in Hannover is a perfect exhibition forum for the Obel-P Group of companies. The focus on solutions for the worldwide forest & timber industry is perfectly matching the market segments of Brødbæk & Co. A/S, Aagaard A/S and Obel-P Automation A/S.

Side by side with Obel-P Group you are in a strong position

The Obel-P Group companies possess solid qualifications and in-depth experience, which enable us to deliver customer specific solutions, which comply with the advanced demands within the timber industry.

Consequently, we ought to be the obvious cooperation partner for everyone, who deals with various aspects of wood machining.

We develop and supply solutions, which comply with smaller as well as major customers' requirement, from when the fresh logs arrive at the sawmill, we can process and handle the material through the transformation, and onto the end product, ready for use.

We have great challenges, we have not marketed our qualifications as a group clearly enough to our customers and other interested parties. I feel it is important to our customers that they know, they are co-operating with a group member company.

With the close synergy within the Obel-P group, I am of the opinion, that co-operation with one or more group member companies puts our customers in a much stronger position to achieve the best solution, as for example IKEA Industry and Inwido. Innovation and product development are major parts of our strategy, and in 2015, we will present new initiatives, which will improve the collaboration between the three group member companies.

At this time, I am delighted to invite you to discover for yourself the qualifications of the three group members: Brødbæk & Co. A/S, Aagaard A/S, and Obel-P Automation A/S – all three group member companies will be exhibiting at the Ligna Show in Hannover, Germany 11th-15th May 2015. Please visit them and see what they may be able to do for you..

This edition of Wood Solutions by Obel-P Group will focus on both the synergy of the Obel-P Group, on the qualifications of the individual company, and how our customers benefit from efficiency improvements and the potential earnings. We hope that you will be inspired to new future projects in co-operation with the Obel-P Group member companies.

Enjoy your reading

Three stands

Our three Obel-P Group companies will exhibit on individual stands, as their products apply to decision-makers at different stages in the value chain. We will anyway on each stand focus on the qualifications of the total Obel-P Group.

Brødbæk & Co. A/S

Brødbæk & Co. will exhibit two units of a high capacity line for re-sawing and stacking of boards. A multi-rip saw splits the boards, and the crosscutting saw cuts to a finished length before stacking. Capacity: up to 500 boards/min. (for more info, read p. 6).

Brødbæk & Co. A/S is located: in hall 27 stand C25.

Aagaard A/S

Aagaard A/S is located: in hall 11 stand A06.

Aagaard A/S will demonstrate their wide product range: silo systems, filter

systems, and the new service concept (more information on page 5)

Obel-P Automation A/S

Obel-P Automation A/S will focus on three product areas: a newly developed line for insertion of clips, fitting and sealings into windows (more information on page 3), automatic handling equipment for production lines, and a new generation of the High Frequency generator. The new, improved and air-cooled HF-generator with an external filter system needs no internal cleaning, which prolongs the durability of the components and decreases the maintenance costs.

Find Obel-P Automation A/S: in hall 12 stand C19.

We look forward to meet you during the Ligna Show.

**Visit Obel-P Group at the LIGNA show
11. - 15.05.2015**

OBEL-P GROUP

Brødbæk & Co. A/S

Hall 27, stand C25

OBEL-P GROUP

Aagaard A/S

Hall 11, stand A06

OBEL-P GROUP

OBEL-P Automation A/S

Hall 12, stand C19



Line for inserting sealing's and clips

Fitting clips and sealing strips automatically saves production time and improves quality.

In close collaboration with one of the largest window and door manufacturers in Scandinavia, Obel-P Automation A/S has developed a system for fitting glass tape automatically. This system saves is time saving, improves quality and reduces costs.

The new system fits glass tape, sealing strips or U-profile strips, depending on the customer's requirements. The concept is module based, and can be supplied as a stand-alone machine or included in an assembly line, for instance together with the module for fitting clips which was also developed by Obel-P Automation. Manual or automatic stations are often integrated for the assembly of fittings, and if higher capacity is required, the lines can be extended with automatic handling systems for lay-up and stacking.

Developing a solution for the industry

The machines can be used right across the window and door industry with a few adaptations to each customer. This system is capable of fitting clips and sealings on 5-7 components per minute, and thus a minimum of one window per minute, fulfilling customers' requirements. One of the developers' objectives was to provide a system that was future-proof. When customers develop new windows, it often means new profiles and sealing strips and clips in new dimensions. When just a few parts are replaced, the machine can be ready again for the new components.

Easily accessible recipe control and other features

The automatic fitting of glass tape and strips is controlled by means of individually prepared recipes, which define



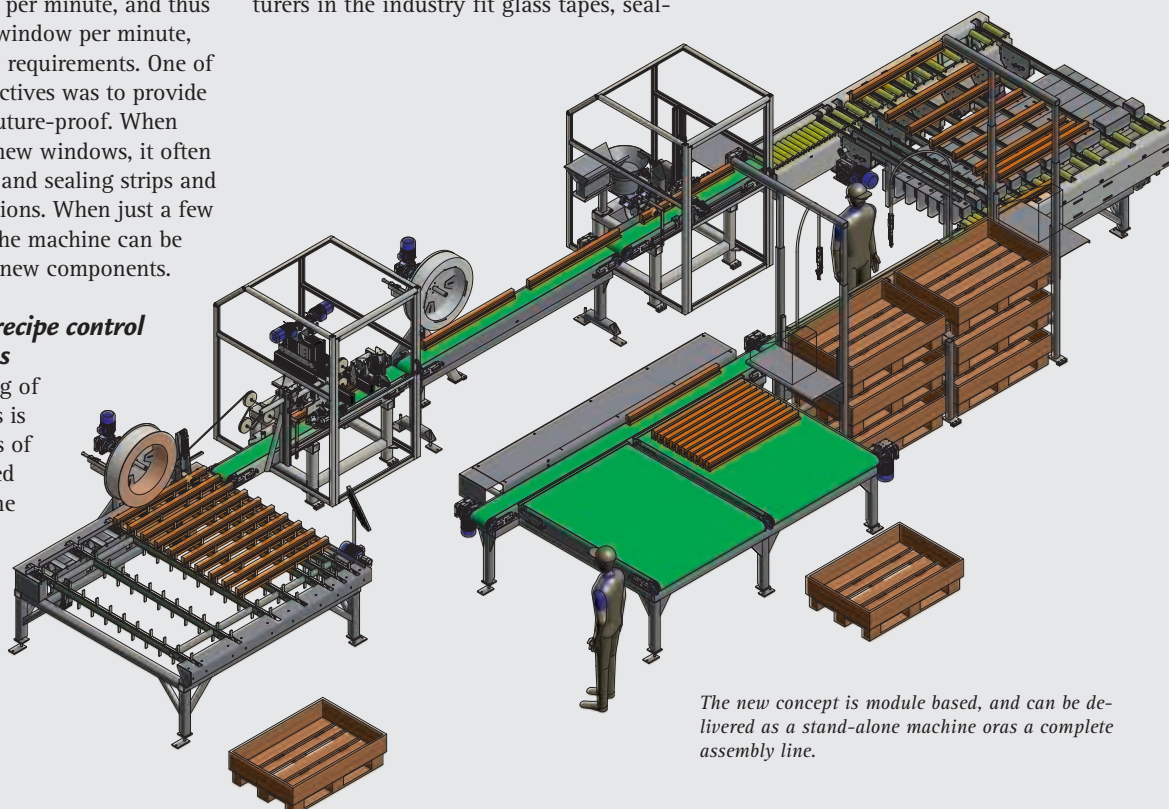
The automatic inserting process is controlled by individually prepared recipes.

individual tasks and what is to be fitted on each of the components. Data can also be transferred by means of a bar code or directly from the customer's computer. It is easily accessible and simple to work with. Automatic recognition of profile types and recesses for lock cases are just examples of the many options Obel-P can supply with these systems.

Large market

At present, more than 95 % of manufacturers in the industry fit glass tapes, seal-

ing strips and U-profile strips manually. This system opens up a very large market for Obel-P Automation – especially in Sweden and Norway, where most of the production is at component level. On export there is also an increasing interest in component level assembly, as customers are seeing their share of windows and doors become larger and larger.



The new concept is module based, and can be delivered as a stand-alone machine or as a complete assembly line.

BSW Timber, their new production lines are adding value, increasing productivity and performance



A line, which manufactures specific products for the fencing and DIY market, the productivity performance at BSW Timber, has been increased significantly

The production of pointed fence posts, featheredge boards, slats and battens are examples of products with Added Value, which represent a considerable market for BSW Timber. The new automatic production lines from Brødbæk & Co. A/S has enabled BSW to significantly increase the productivity and performance.

Brødbæk & Co. have supplied solutions for over 30 years and are characterised by the focus on customised packages, which bring increased capacity and Added Value to the product. Recently delivered to BSW Timber in the UK, we developed production lines, which run independently of the main sawmill lines, which produce finished products for the fencing and DIY market. This investment has significantly reduced labour, increased capacity and flexibility.

Focus on Added Value

“Our long-time experience enables us to bring Added Value to our customers. As a matter of fact we are able to understand ourselves the difficult issues our customers face, and to develop a customised solution,” states Leif Dam, Managing Director at Brødbæk & Co. A/S.

Increased productivity performance

The solution for BSW Timber repeats previous cases, as Brødbæk & Co. A/S recently supplied production lines to four

of the BSW sites for re-sawing timber blocks coming from the main sawmill lines. “Running an independent line for the manufacture of specific products, for instance the fencing market has increased both the productivity performance and the flexibility” according to Leif Dam. Previously such production involved a great deal of monotonous, repeated work, including heavy lifting in connection with de-stacking and stacking. The new lines involve significantly reduced staffing, as today the operators primarily supervise the production and the product quality.

Entire production lines

The delivered production lines feature 5 main elements: 1. Automatic in feed equipment for the production line 2. Band saw unit 3. Post pointing unit 4. Bundling and strapping system for small packages for the DIY market 5. Stacking machine including automatic bearer insertion, strapping and handling of total packages.

Particularly the post-pointing unit constitutes an important element of the new solution. Previously, if the work was carried out – it required more manpower, had less capacity, and often produced irregular quality.

Competitive advantages thanks to flexibility

The solution at BSW Timber has been designed with customized functions, which at the same time bring optimum effectiveness. Leif Dam explains: “We live a short distance to LEGO, and from them we learnt that our solutions can be made up with different standard modules, similar to LEGO, so that we end up with a customized solution. Based on our experience and long-standing customer relationships our objective is to bring considerable competitive advantages to our customers”.



The post-pointing unit in a line similar to the BSW installation

Aagaard's new service concept will ensure maximum uptime and minimize operating costs



Aagaard A/S has full focus on stable operation of the customer's finishing line and dust extraction system and with fewest possible interruptions. Therefore we offer service agreements with i.a. planned maintenance visits. This minimizes the risks of breakdown.

In close dialogue with customers Aagaard A/S has developed a service concept exactly targeted at our customers. This new service concept – the TPM Service Agreement – is based on LEAN. Throughout the development process theories have been adapted to the concept and practice.

Many advantages

The structure of this new service concept provides tangible benefits for the customer to enter into an agreement. "Our customers with service agreements will e.g. have first priority in the service department and direct contact to our service technicians," says Mr. Troels Færch, service manager from Aagaard A/S. "This is of great importance for their quick resumption of operation after a breakdown." At the same time the agreement includes i.a. scheduled maintenance inspections, special discounts on spare parts and is based on a flexible price structure. Here the customer knows his maximum price for the agreement, but he will only be invoiced for the time actually spent.

Planned maintenance ensures ATEX approval

The majority of Aagaard A/S's customers have ATEX approved filter systems. In order to maintain this approval, continued maintenance of the system by skilled staff is a requirement. "Several of our customers are not aware of this fact," says Troels Færch. "So you could say that one of the extra benefits of entering into a service agreement with us is that the approval will be maintained."

Monitoring by TPM Control

Monitoring of customer systems by TPM Control will often be an integrated part of a service agreement. TPM Control collects and processes relevant maintenance



IKEA Industry in Chinese Nantong is one of the customers who concluded a service agreement with Aagaard A/S.

data from the customer's system e.g. temperature, operating hours, power consumption and pressure. If unacceptable deviations are recorded the customer's service team at Aagaard A/S will be notified and they can react and correct defects immediately in order to avoid unnecessary breakdowns. The technicians connect to the customer's system via the internet. It only requires that the customer's system also has access to the internet for monitoring, troubleshooting and service through online support. The

control panel of this concept was developed in cooperation with one of Aagaard A/S's largest suppliers.

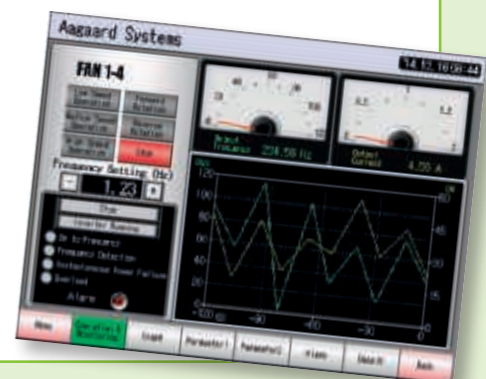
Well received

"Altogether we can say that our new services were well received," says Troels Færch. "Several customers have already entered into service agreements, and we are in dialogue with many more customers. This applies to customers with finishing lines and filter systems worldwide."

Experience energy savings by PID control in practice

Aagaard A/S has installed a test filter system with this new monitoring system and PID control at their main office in Denmark. This enables the customers to see in practice how to achieve significant energy savings with PID control. At the same time they can experience how monitoring, troubleshooting and servicing take place. Through video surveillance Aagaard can e.g. see what happened 120 seconds before and after a defect occurred at the customer and this

gives even better opportunities for quickly correcting the defect.



Close cooperation on a total solution

At Åsljunga Pallen, Sweden, the production of throwaway pallets must be as efficient as possible. The new production line from Brødbæk & Co. A/S makes the working operation even more effective and increases the capacity and performance significantly.

Åsljunga Pallen manufactures special pallets, typically for single use, for example for transport of goods, such as washing powder, foodstuffs or furniture.

A product with poor accessibility

It is of vital importance for the company to be extremely competitive on the price of the finished pallet. Consequently, the production must be as efficient and the boards as accurate as possible. Good thin boards are difficult to come by on the market, as only few producers manufac-

ture this type of component - the production of boards, 14-15 mm thick generates a considerable waste.

A long-time cooperation

For that reason, Åsljunga Pallen decided to invest in a solution, which permits them to manufacture the correct boards for the pallet production. Brødbæk & Co. developed the solution in close cooperation with Åsljunga Pallen - our customer since 1998.

A customized solution

"We have a good knowledge of the customer's operation, which enabled us to develop a specific solution, which meets the customer requirements", states Leif Dam, Managing Director at Brødbæk & Co. A/S.

The new high capacity production line includes re-sawing and stacking with a performance of 500 boards per min., which increases the capacity significantly.

Additionally, the staffing of the production line can be reduced from 3-4 to 1-2 employees.

A total supplier – and security

For our customer once again we delivered a total solution. "Our customers are confident, that we are a total supplier, who will take responsibility for a part of the production line, which is not delivered by Brødbæk & Co.," reports Leif Dam. "We aim to work out the best possible solution for the customer, considering the customer's individual requirements and budget, - and we never impose a standard solution on a customer. The customers' competitiveness is ensured as much as possible through customized solutions, which increases the flexibility, the productivity and the capacity performance. Just as you will see at Åsljunga Pallen"



A similar line is running at Bien-Holz GmbH, Uelzen, Germany

A Brødbæk & Co. concept for high capacity stacking



Fully automated system for packaging at Huntonit in Norway

For Huntonit, higher speed and capacity with improved OEE are the greatest advantages of the fully automated packing line from Obel-P Automation A/S.

Huntonit is the only manufacturer of semi-hard wood fibre board in Norway. Among other things, they produce wall and ceiling boards for sale through builders' merchants.

Greater OEE

The newly developed systems are an extension of Huntonit's present line for wrapping and packing of boards. The implementation of the new solution runs in two stages, and increases speed and thereby capacity. The new system requires a minimum of time for change-overs in production, and thus the OEE of the system is considerably improved. The change over time has been reduced from 2 hours to a few minutes and fully automatic handling systems for sticks and pallets have been integrated in this new line.



The new packaging line for Huntonit is now running 24/7 and packs up to 72 workpieces per minute.

Close dialogue

The system was developed in close collaboration between Huntonit and Obel-P Automation A/S. "We always give high priority to dialogue with the customer about finding a solution to an assignment. We need to know the customer's business in order to see new possibilities and give the best advice." This also applied to the

present system for Huntonit, which is now running 24/7. "We set up a close dialogue to work out the optimum solution and layout." Factory Manager Knut Nielsen from Huntonit agrees, and adds: "Huntonit has previous good experience of projects delivered by Obel-P Automation A/S. We need a supplier who can deliver strong and flexible machine solutions."

Customer designed finishing line for Carl Hansen & Søn A/S



Carl Hansen & Søn wants to customize each product to customer requirements for lacquering and colour. This requires a flexible solution for surface treatment of tables and chairs which has been developed and delivered by Aagaard A/S.

Carl Hansen & Søn was founded in 1908 and is today one of Denmark's leading design companies and the world's largest producer of furniture designed by Hans J. Wegner. Their production is fully automated with robot solutions, while other parts of the production are less automated. High flexibility and ability to make customizations in the surface treatment of small deliveries is a must when e.g. the order is for six chairs in bright orange.

Flexible system

This requires a very flexible finishing line with quick change-over from table tops to chairs and single components which Aagaard developed and delivered to Carl Hansen & Søn in the summer of 2014. Mr. Lars Bentsen, group production manager from Carl Hansen & Søn is very satisfied with the cooperation with Aagaard.

Very reliable partner

"From the beginning Aagaard made itself thoroughly acquainted with our exact needs. We got exactly the solution meeting our needs, and we are very satisfied," says Lars Bentsen. "Throughout the process we experienced a very positive cooperation with Aagaard. They are very reliable and comply with the agreements concluded. They have more than lived up to our expectations."



The new system for Carl Hansen & Søn is delivered with full heat recovery living up to the company's green profile.



The new finishing line includes sanding booth and drying tunnel. In addition Aagaard A/S developed special trolleys for transportation of furniture into the drying tunnel.

Aagaard A/S turns 50 years

During 5 decades Aagaard A/S has developed, manufactured and delivered some of the strongest solutions in the industry within silo systems, dust extraction systems and systems for surface treatment, where there is a strong correlation between price and quality. Aagaard A/S was founded in 1965, and in 2000 Finnrose A/S was acquired. Aagaard A/S became a part of Obel-P Group in 2008.

Aagaard A/S has always focused on continued further development of existing offerings and launched new customer-designed solutions – based on modular systems. Solutions that Aagaard A/S's customers benefit greatly from every day, now and earlier."



Brødbæk & Co. A/S since 1984

2014 Brødbæk & Co. celebrated the big 3-0. Kaj & Bente Brødbæk, husband and wife, established the company back in 1984, and sold to Obel-P Group in 2004. The company is total supplier of solutions for sawmilling and associated industries, comprising log handling,

chipper canter, quad circular saw lines, quad resaw lines, crosscutting, edging, sorting and stacking line and equipment for Added Value – customized solutions ensure that the customer achieves the optimal Added Value, according to his requirement.

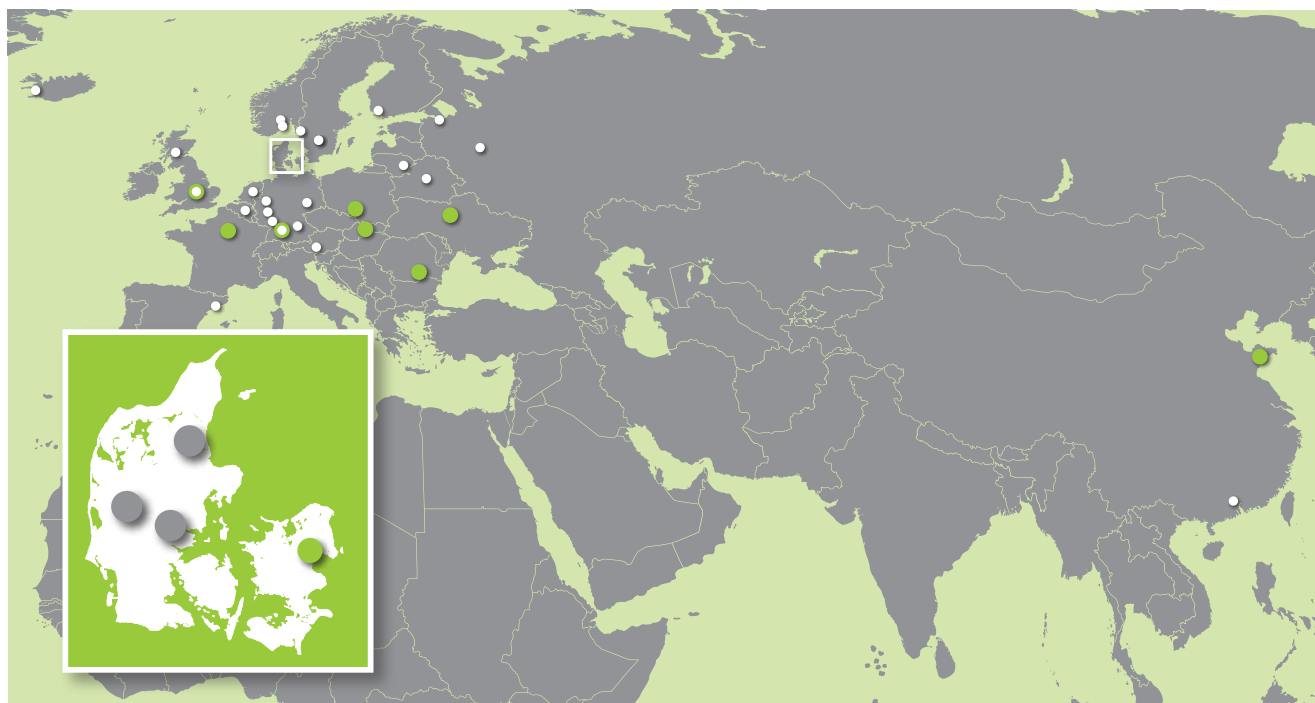
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