



The fully automated briquetting plant can handle several thousand kilos of woodchip per hour.

Recycling of woodchip at Moelven's largest sawmill

Moelven's sawmill in Karlskoga has invested in briquetting plant from Aagaard A/S. The plant recycles woodchip from the sawmill, giving Moelven new earning potential.

The market for the sales of briquettes for both private and commercial heating is growing, inter alia as a result of the increased focus on the reduction of CO2 emissions and more environmentally justifiable fuels. With the new briquetting plant, Moelven has therefore obtained a fully automated solution with an environmental focus.

15 years of collaboration

Moelven is one of Scandinavia's largest companies within the production of high-quality wood and mechanical woodworking and processing. Moelven Tim-

ber has 12 sawmills in Sweden and Norway with together more than 3500 employees. The sawmills process a good 2.7 million m3 of timber per year. Aagaard A/S has, throughout the past 15 years, collaborated with Moelven for the supply of machines and solutions for all its sawmills.

Fully automated plant with monitoring system

The fully automated briquetting plant from Aagaard A/S transports residual material from production to the large presses, each of which can handle between 1200

and 1500 kg of woodchip per hour. There is no noise from the plant, and all dust is collected in the mounted ATEX-certified dust filters.

"We have developed solutions in close collaboration with customers and CF Nielsen, who have supplied the presses," project leader Søren Bonde from Aagaard A/S told us. "We have been to the factory in Sweden a number of times in connection with this project in order to ensure that the customer receives the right solution. The solution is now underway and is going as planned."

Aagaard supervises projects 24 hours a day. If

something goes wrong, notification is given via SMS, and Moelven's own engineers can come out and investigate the fault more closely. Moelven's engineers are trained by Aagaard to service precisely this solution.

ATEX-approved filters

Aagaard has one of the timber industry's largest ranges of filters, all of which are ATEX-certified. Aagaard has had an external and fully documented for full-scale explosion test carried out on all their modular filters in accordance with ATEX directive 94/9, which also meet the requirements in EN 14797 - EN 14460.

"Recycling of woodchip is important for the environment"



Aagaard A/S in Belarus

...Read Page 3



New collaboration in the Russian market

...Read Page 3



Automated door assembly solution from Obel-P Automation increases capacity

...Read Page 5



Brødbæk & Co. in intensive solution development with the Irish sawmill ECC

...Read Page 6



LEADING ARTICLE

by the Chairman of the Board of Directors of the Obel-P Group, Asbjørn Thomsen

Global focus ensures growth

While the financial crisis was raging in Europe and North America, within Asia, especially China, it was full steam ahead. Many countries have replaced the USA with China as their most frequent collaboration partner, and for example China today represents 14.3% of the USA's total foreign trade.

Growth in Asia is continuing, and in Obel-P Group we are seeing a great many possibilities for increasing trade with countries in the Far East. This is of course happening with respect for and in continued collaboration with our present customers within Scandinavia and the rest of Europe. But through continued growth, we are on our way to good results both for our customers and for Obel-P Group.

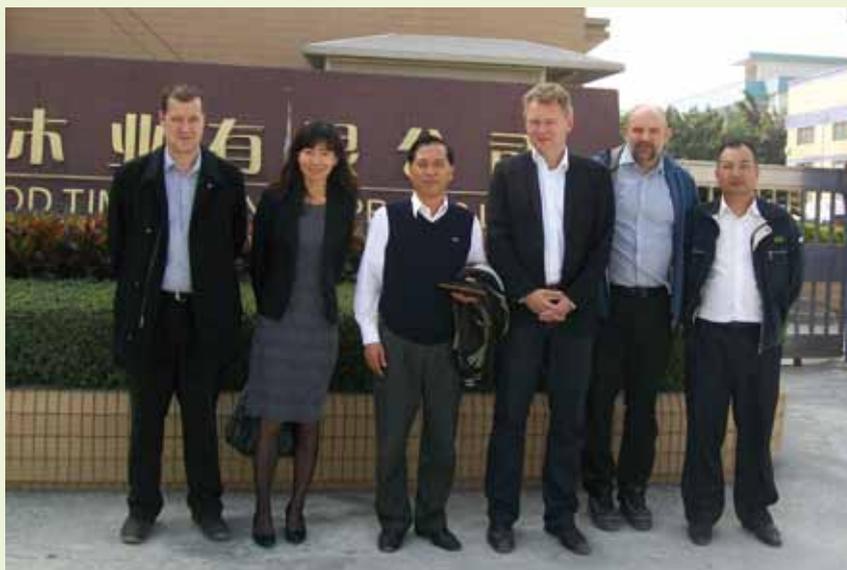
The opportunities within Asia are therefore arising both as a result of the fact that many of our present customers in Scandinavia and Europe are choosing to move their production to Asia and by virtue of the fact that the economies of China and other Asiatic countries are roaring along.

China is double the size of the whole of Europe, and twice as many people live there. The potential is enormous, and if we do not show ourselves to be a solid collaboration partner, we will forfeit opportunities to gain a foothold in the market. Therefore we are now starting off by sending Aagaard A/S ahead of Obel-P Group's consolidation within the Chinese market.

Moreover, the Chinese are becoming more and more aware of environmental questions, especially within the working environment, and in this regard we see a big market for Aagaard's filter ranges. At the same time, the Western European companies which move to Asia satisfy the same need for machines, safety and environment as they do within their factories in Europe. They therefore want suppliers they recognise, such as Obel-P Group, to be able to supply turnkey factories – within Asia also.

And we are fully prepared – to develop and to implement solutions for our present customers both within Scandinavia and the rest of Europe, and in the new markets in Eastern Europe and Asia. Read more about some of the solutions we have already delivered in the current edition of Wood Solutions by Obel-P Group, and allow yourself to be inspired to your next project in collaboration with one or more of the companies in Obel-P Group.

Happy reading.



Koncernsalgsdirektør Kenneth S. Rasmussen (tv) med Obel-P Groups kinesiske samarbejdspartnere samt bestyrelsesformand Asbjørn Thomsen og direktør Morten Pipper.

2011 looks bright for Obel-P Group

Obel-P Group is well-equipped for the future. Whereas many colleagues in our line of business have cut back during the crisis and now cannot keep pace with the rapidly increasing demand, the companies in Obel-P Group are in a good position to resolve their clients' challenges.

Quality, service and reliable delivery

Solutions from the Obel-P Group companies are highly recognised by customers for high quality and good reliability of supply. "Companies in Asia and in particular China are now also beginning to demand our quality, service and ability to deliver," says Kenneth Rasmussen. Prices are also rising in China, and the factories, many of which have moved from Europe, are demanding European machines. At the same time it is crucial to have an effective service as regards existing solutions, by which means we spare the customer long operational outages, which can be very costly.

"We have great expectations of 2011," says Group Sales Director Kenneth S. Rasmussen. "We are now beginning in a big way to draw advantage from our ability to combine our broad competencies within Obel-P Group.

Collaboration makes us strong

Thus, several projects and ventures already exist in which the competencies of a number of companies within the group will be brought into play. One example

is a customer in Norway, to whom we have supplied a solution combining spray-painting systems from Aagaard A/S with robotic technology from Obel-P Automation to yield a fully automated solution for painting doors. Similarly a customer in the USA, for whom we are developing a solution which can stack planks in a special material. Here stacking technology from Brødbæk & Co is used together with a high-technology automated section from Obel-P Automation.

Chairman of the Board Asbjørn Thomsen at the opening of ShunDe Expo Fair in Chinese Guangzhou

Trade fair calendar 2011 for Obel-P Group

Fair	Location	Date
DREMA	Poznan, Poland	29 March – 1 April
LIGNA	Hanover, Germany	30 May – 3 June
BIFE-TIMB	Bucharest, Romania	31 August – 4 September
LISDEREVMASH	Kiev, Ukraine	20 – 23 September
WOOD-TEC	Brno, Czech Republic	18 – 21 October



New collaboration with Global Edge forms the basis for growth within the Russian market

Eastern Europe, and especially the Russian market, constitute the order of the day for the Obel-P Group, and throughout the last few years the group has been working on the correct setup for this vast market. The objective is growth through sales of total solutions. New collaboration with Global Edge is now paving the way.

The Obel-P Group has been working throughout the past 12 months towards the specific goal of achieving a larger share of the Russian market. The appointment of the Group Sales Director, Kenneth S. Rasmussen, in 2010 was a step towards this goal, as Kenneth is extremely knowledgeable about the

Russian market and has increased awareness of sales of total solutions within the market.

A perfect partnership

“In Global Edge we have found precisely the collaboration partner we have been searching for,” says Kenneth S. Rasmussen. “Crucial

factors have been both their size and their leading-edge competence in sales of complex solutions for major projects, since it is also here that we in Obel-P Group have our primary competence.” Global edge is one of the largest suppliers of solutions and machines for sawmills, and window and furniture producers in Russia.

Success with large-scale, complex projects

Throughout the past 12 months, Obel-P Group have been successfully

selling solutions to international businesses such as Swedwood and Jeldwin, and theirs is the expertise which will now also be used within the Russian market in collaboration with Global Edge. The first projects are already underway. “Things have been happening somewhat faster than we had anticipated,” says Kenneth S. Rasmussen. “Right now we have projects with many large window manufacturers, in which we shall supply everything from sawmills and presses to extraction and painting. And there are more projects in the pipeline.”



Increased Eastern European focus on extraction and safety

ZOV is one of Belarus' largest furniture producers, with more than 1700 employees. The company has just invested in a total filtering system with ATEX-approved filters from Aagaard A/S. The investment underlines the increased focus on safety and the operating environment within Eastern Europe.

Sales of solutions to ZOV is one of the results of the goal-directed efforts of Obel-P Group and Aagaard to gain market shares within Eastern Europe. “Sales to ZOV simultaneously highlight the increased focus on extraction and safety with-

in the new filtering solutions for production in timber industries,” says Per Frost, Head of Sales at Aagaard A/S.

ATEX-approved filters

Previously, people did not focus to the same

extent on safety, and filters without ATEX certification had therefore been acceptable. This tendency is changing however, a great competitive advantage for Aagaard A/S, which has one of the world's best ranges of ATEX-approved filters. At the same time, safety during production is considerably increased.

“We have delivered three modular-construction filtering plants to ZOV”, Per Frost told us. “All filtering plants are ap-

proved and tested in accordance with EU ATEX directive 94/9. In this way, ZOV has achieved the greatest possible plant safety in respect of fire and/or dust explosion.”

If a dust explosion occurs, the patented explosion panels directly on the dust side open, resulting in far less damage to the filter.

Visit Obel-P Group at LIGNA Trade Fair

30.05. – 03.06.2011

LIGNA

HANNOVER · GERMANY
Weltmesse für die Forst- und Holzwirtschaft
World Fair for the Forestry and Wood Industries

LIGNA Trade Fair will take place in Hanover from 30 May to 3 June. Obel-P Group will be present at the fair, with 22 colleagues from the whole group.

On stand E25 in hall 22, Obel-P Automation will be exhibiting a robot for glueing glass into windows, GluEye glue scanner and an automated clip-assembly machine (see pages 4-5 of this brochure). On the same stand, Aagaard will be showing the newest ATEX-approved filter and a flow-coater.

Brødbæk can be visited on stand B36 in hall 27, where they will be exhibiting an edger with 4 movable saw blades (see page 7 of this brochure).



Filtering system under construction at ZOV's factories in Belarus

Success with the development of customised special machines

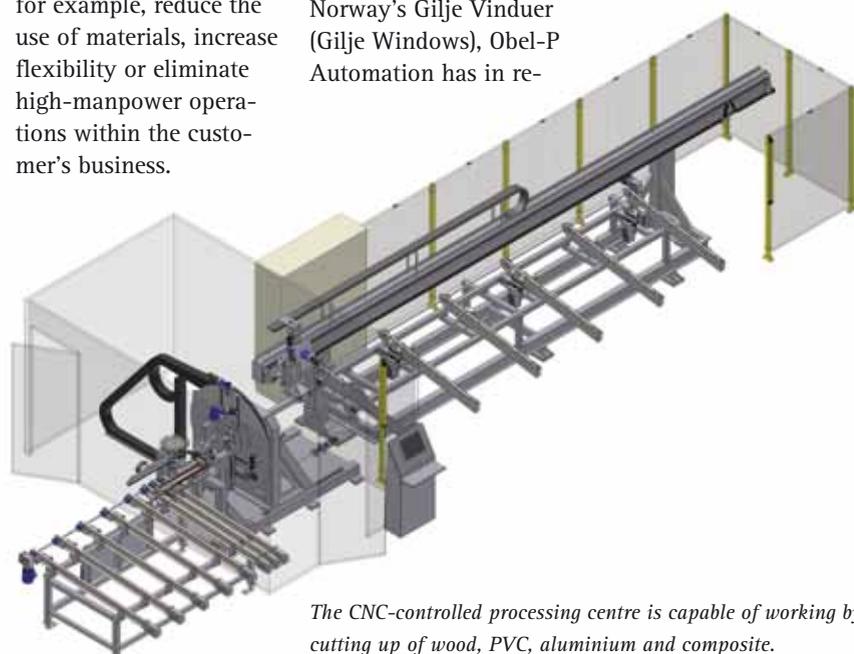
The demand for special machines which meet the customer's specific requirements is increasing rapidly. Here, the technological leading-edge competence of Obel-P Automation remains part of the customer's success.

Throughout the past year, Obel-P Automation has been specialising in the development of high-technology customised solutions which, for example, reduce the use of materials, increase flexibility or eliminate high-manpower operations within the customer's business.

CNC-controlled processing centres for Gilje Vinduer

In collaboration with Norway's Gilje Vinduer (Gilje Windows), Obel-P Automation has in re-

cent years developed a fully automated solution for CNC processing and cutting of alu-profiles for windows. The machine can in addition also process wood, PVC and composite. With the solution, flexibility and capacity are increased, while the internal logistics are reduced.



The CNC-controlled processing centre is capable of working by cutting up of wood, PVC, aluminium and composite.



"We are experiencing an increasing demand for customised special machines which can increase effectiveness and flexibility while also reducing consumption of materials," says Ivan Madsen of Obel-P Automation.

"Our customised solutions are moderately priced. But the yield is quite the best."

"The cut mouldings are typically delivered in a large pile," says Head of Technology Ivan Madsen of Obel-P Automation. "With the new solution, the system can produce CNC optimisation, wind-up routines and processing in a single operation.

Increased flexibility and better utilisation of materials

The system ensures the best possible utilisation

of the alu profiles so as to calculate the optimal cutting out. And here there is great flexibility, as the machine can process the blank from the top, bottom or sides.

"With this solution the customer gets a finished product in a single routine," Ivan Madsen goes on. "The internal logistics connected with processing will be done away with, practically speaking."

Automated clip assembly ensures quality

In the production of wood-alu windows, clips are used for assembling the alu profile, so that it is correctly assembled and protects from rain, sleet and snow. This task can be automated and quality-assured the solution from Obel-P Automation.

Manual clips assembly increases the risk of defects. With manual assembly of clips, every fourth clip must typically be picked out and assembled again because it was not correctly mounted. This slows

down the process and increases the use of resources.

"With a fully automated clip-assembly solution, the customer can typically spare two to three employees," opines Head

of Technology Ivan Madsen from Obel-P Automation. "the same time our customers experience better quality of their finished products and greater operational safety."

Great flexibility

The clips workstation is flexible and can be adapted to the individual profile. The blank is automatically transported forwards to the

clip workstation which, with a blank length of e.g. 1200 mm, is able to assemble 20-25 clips per minute. The finished,

clipped blank is then transported to the buffer belt, ready for further processing.

Changeover of the clips-assembly machine is a simple and manageable operation.



Automatic door assembly increases capacity and optimises logistics

Stock reductions, considerably increased capacity, and improved working environments are some of the gains from Obel-P Automation's automatic door assembly solution. One man can finish off four doors per minute.

Automatic assembly

With the solution for automatic door assembly from Obel-P Automation, the newly produced and newly painted doors are automatically transported away for mounting of lock cases and hinges. Thereafter they are wrapped in plastic and transported to a warehouse ready to be picked out for the respective order. It all happens without manual intervention, and one man can by this means finish four-five doors per minute.

"With the fully automatic solution, the producers can typically finish around 95% of their

doors", relates Head of Technology Ivan Madsen from Obel-P Automation. The last 5% of production, which requires special treatment, is dealt with manually at an assembly station which is positioned in the automation line. This achieves good balance between degree of automation, technical complexity, and affordability.

Vigorously increasing capacity

With automated door assembly, production capacity is considerably increased, since assembly and packaging can take place at a rate which would require several manual assembly

lines to be able to achieve the same capacity. At the same time the solution yields considerable improvements within the working environment, since heavy lifting etc. is reduced.

Identification via RFID chips

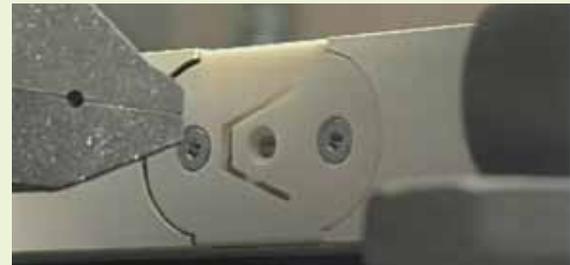
Every door is identified by the mounted RFID chip which ensures that the correct lock and the correct furniture has been put on the particular door.

Simulation of complete door factory

With the automation of complex operations, in which resources are exploited by a number of users at various times, a bottleneck analysis can be inconclusive. Here, dynamic simulation of the automated line has proved a great help in

many situations. In an actual project, a computer model of the entire production line was constructed and a 14-day order quantity was run through in only a few minutes on the PC. "Based on the results, layout, flow and capacity

could be adjusted in greater detail," Ivan Madsen explained. "The simulation helped to convince the customer of all the advantages of the solution, which they are still highly satisfied with today."



A hinge is mounted and fastened with screws. All this takes place in one fully automated operation.



With the fully automated solution, one man can finish four doors per minute. One of the operations is to load locks on to the machine ready for assembly.

Automate the glueing of glass and make big savings

The new fully automated solution from Obel-P Automation enables glass to be glued and mounted into window frames with a minimum of manpower. The solution can easily be integrated into the existing production flow, and the savings are big.

In both Germany and the USA, fully automated solutions have been used in recent years for the mounting and glueing of glass. "It is our estimation that several window producers are now ready to take the leap towards the automated solution," says Ivan Madsen, Head of Technology at Obel-P Automation. "We are experiencing a large de-

mand for our solution, which automates very manpower-heavy processes."

Simple integration

The solution can easily be integrated into the existing production flow and automate the glueing of glass into frames and window casings. The glue adheres to both

wood and lacquered wood, as well as to PVC and composite materials. The solution is automatically adjusted for products of different sizes. At the same time, glue wastage is minimised.

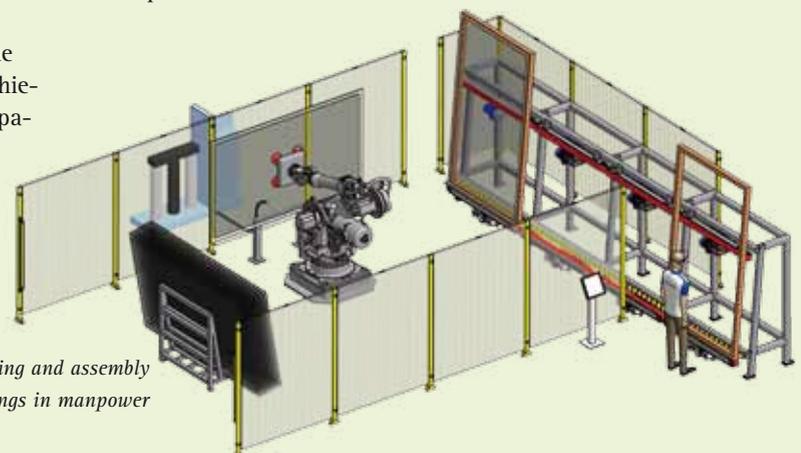
With the solution, the window producer achieves a doubling of capacity, and whole lines can be served by a single operator. Control is carried out

on a user-friendly touch screen.

Individual pane replacement

In connection with the development of solu-

tions, tools have also been developed for the replacement of damaged glass, so that this process is just as simple as it is today.



Automation of glueing and assembly yields considerable savings in manpower



“ECC has taken delivery of a solution which increases the flexibility of their production”

Assembly of a line for transporting packs through film-wrapping, automated bearer insertion and strapping

Intensive solution development with the Irish sawmill ECC

The implementation of new areas of business while simultaneously increasing the effectiveness of existing manufacturing requires a great deal of consideration if the optimum solution is to be achieved. Close collaboration on the project development has provided ECC Timber Products with the most flexible solution.

ECC Timber Products is situated in Galway, Ireland. The company processes more than 300,000 m3 of timber per annum and is one of the leading sawmills in Ireland. ECC Timber has been working together with Brødbæk & Co. since 1996, when ECC purchased its log sorting

system from the Danish company.

Development of profitable solutions

ECC decided in 2009 that in the course of the coming year they would look deeper into the post-pointing processing situation in order to increase

the range of products available to their customers.

This was the starting point for a good 15 months of solution development with close dialogue between Brødbæk & Co. and ECC. The primary concern for ECC was to ensure great flexibility in their future production, and at the same time add value to their customers' products in processing the timber by e.g. being able to point the fence posts when they are on their way through production.

“We have been on many visits to Ireland to study the current conditions and to discuss possible solutions with ECC,” says Administrative Director Leif Dam of Brødbæk & Co. “At the same time, together with ECC we went on to visit other customers for the purpose of studying real life solutions in practice.”

Time for development

Solution development produced quite particular challenges, in that at the same time as implementing the new post-processing systems, one also had to increase the effectiveness of existing routines which at that time were too time-consuming with a great deal of physically demanding manual work.

“Our customers appreciate and profit greatly by the fact that we set time aside for the development of solutions and do not pull a standard solution down over their eyes,” Leif Dam

continues. Brødbæk & Co. make the big difference here. And the company willingly draws other subcontractors into the project. These may be sister companies within Obel-P Group, or others of the customer's collaboration partners. In the ECC solution, we are collaborating with the Slovenian company, Ledinek, which has been in charge of the delivery and implementation of the high-speed planer.

Collaboration lasting years

For years, ECC has chosen to make use of Brødbæk & Co's competencies in a number of areas. The collaboration started in 1996 with the supply of a log grading system. Subsequently Brødbæk & Co. supplied an edger with 4 movable saw blades and resaw line, and now a high-speed grading, resawing and planer line with post-processing plant.

The new solution for post-processing is ongoing. The plant will be used for destacking, grading, planing, resawing, cross cutting, and stacking of primarily kiln-dried material.



Assembly of the primary stacking line in the Irish company ECC. The secondary stacking line can be seen on the right.

Fully integrated edger is a bonus on the bottom line

Increased profits and a better bottom line are often the result of a fully integrated edger solution. Over the past 25 years, Brødbæk & Co. A/S has developed great experience in edging work, hereby ensuring the optimal solution – every time.

Flexibility is one of Brødbæk & Co's strengths. Moreover, when it comes to fully integrated edger solutions, Brødbæk take as their starting point of departure the customer currently before them, and they develop a solution which is not just simply based purely on capacity. The customer's wishes and needs is the starting point, for example the possible combination of short and long boards in production. From this the optimal solution is calculated, including how many blades should be in operation.

Manpower-saving edger for the German company Schlesselmann

Brødbæk & Co. has been collaborating with Schlesselmann GmbH in Asendorf, Germany throughout several years. In 2005 Brødbæk & Co. supplied a high-capacity stacking plant, and in 2010 were commissioned to develop a supplement to the system from 2005. Brødbæk's primary focus ought to be on an edging solution, which should cut expenditure on manpower and increase profits.

Brødbæk developed a complete solution with both edging and sorting plant for side boards.

With this package, Schlesselmann also gains the benefit that all wood exits in one place, ready sorted and packaged. The solution is now fully

operational, and the savings have been both increased profit and reduced manpower, primarily through a reduction in superfluous manual handling.

Increased capacity for the Spanish company Maderas José Sáiz

Brødbæk supplied the first edging line to Ma-

deras José Sáiz back in 1997. In 2010 the mill went through a major renovation, among other things with the installation of a principal saw line from the German company Linck. This had greater capacity than the existing one, which produced capacity problems on the existing edging plant.

Brødbæk has developed a solution including a computer-controlled board edging line with 4 saw blades to cut into three variable widths, and sorting of up to 120 boards per minute into 12 bins. The plant is operated by one man as opposed to 3, and eliminates bottlenecks in the sawing line.



“Edging plant will be tailored to meet the customer’s requirements.”

Edging and sorting plant for Schlesselmann achieves both manpower saving and increased profit.

Development of edging plant

Over the years, Brødbæk & Co. have developed leading-edge competence in edger solutions and in integration of edging lines into complete solutions.

Year	Development
1986	Brødbæk & Co. develop the first edging plant with a foreign principal machine
1992	Brødbæk & Co. develop their first edging plant with their own principal machine. The machine has a max. speed of 180 m/min.
2004	Brødbæk & Co. introduce the newest model of principal machine to their edger solution with auxiliary saw blades. The speed is up to 300 m/min. In single set up, the solution can run with up to 3 variable blades and a number of fixed blades; in double set up with up to 5 variable blades and a number of fixed blades.

Brødbæk & Co. have edging plants operating in Norway, England, Ireland, Germany, Spain, France, Italy, South Africa and Denmark.



Morten Pipper (pictured) and Kenneth Rasmussen are new directors within Aagaard A/S.

Aagaard A/S undergoes reorganisation

Johannes Balle and Per Frost are withdrawing as prominent figures in Aagaard A/S after many years of ownership and leadership. However, customers and colleagues will fortunately still be able to draw on their great knowledge and experience. Both are continuing within the company, Johannes as Head of Production and Development and Per as Head of Sales.

Morten Pipper and Kenneth S. Rasmussen remain new directors within Aagaard A/S. They both simultaneously retain their current jobs, Morten as Director for Obel-P Automation and Kenneth as Group Sales Director within Obel-P Group.



Obel-P Group increase their focus on Eastern Europe and are opening offices in Ukraine

As part of the strategic plan for the coming year, Obel-P Group want to expand their activities in Eastern Europe and Asia markedly. In this regard, in February 2011 offices were opened in Ukraine and activities within the Russian market were strengthened with new collective agreements.

Throughout recent years, the Ukrainian market has become more and more important for Obel-P Group, and with the new, permanently staffed offices, continued progress is anticipated within this market.

The offices are rented from MarketLis, a dealer in Homag machines in the Ukraine. Obel-P Group want to have the opportunity to use MarketLis' showroom, among other things for exhibiting Aagaard A/S filters.

Obel-P Group - a historical overview

Get some quick information about how Obel-P Group was formed and about the companies behind it.

1954	Ib Obel Pedersen was founded
1965	Aagaard A/S was founded
1984	Brødbæk was founded by Bente and Kaj Brødbæk
1986	Uffe Sass Maskinfabrik A/S founded
1989	PL Control ApS founded by Per Frost and Lars Kristensen
2000	Aagaard A/S buys out Finnrose A/S Asbjørn Thomsen buys out Ib Obel Pedersen
2002	Ib Obel Pedersen buys out Gamma and changes the name to Obel-P Group
2003	Obel-P Group buys out Uffe Sass
2004	Obel-P Group buys out Brødbæk
2006	Uffe Sass, Ib Obel Pedersen and Gamma merge to form Obel-P Automation
2008	Obel-P Group buys out Aagaard A/S Obel-P Group buys out PL Control

Contact information for Obel-P Group

OBEL-P GROUP
— Brødbæk & Co. A/S

Brødbæk & Co. A/S

Mølgaardvej 1 · DK-7173 Vonge

+ 45 75 80 35 99
sales@brodbaek.dk
www.brodbaek.dk

OBEL-P GROUP
— OBEL-P Automation A/S

Obel-P Automation A/S

Cypresvej 16 · DK-7400 Herning

+ 45 97 21 78 00
sales@obelp-automation.dk
www.obelp-automation.dk

OBEL-P GROUP
— Aagaard A/S

Aagaard A/S

Smedevænget 14 · DK-9560 Hadsund

+ 45 96 53 12 00
sales@aagaard-systems.dk
www.aagaard-systems.dk

OBEL-P GROUP
— PL Control ApS

PL Control ApS

Sverigevej 4 · DK-9560 Hadsund

+ 45 98 57 20 28
mail@plcontrol.dk
www.plcontrol.dk

Publisher

Obel-P Group · Engager 7 · DK-2605 Brøndby

Editing and layout

Sales Director Kenneth S. Rasmussen, responsible person
Jette Bjerrehus, Cogni2
Janni Poulsen, Freelancegrafik.dk

Reprints and copying are only permissible by arrangement with Obel-P Group.