

A magazine from the Sapa Group • # 2 2011

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SPINNING FASTER

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sapa:

Exciting future for Sapa

The recent year's structural and organic growth has made Sapa the world's largest aluminium extrusion company and the global leader within heat transfer solutions for the Automotive industry. In five years we have more than doubled our size and now have operations in 35 countries, more than 15,000 employees and market leading positions in both Europe and North America.

With our latest acquisition of Jiangyin Haihong Non-Ferrous Materials Co. Ltd. ("Haihong") we have successfully established a footprint in Asia, as we now have extrusion and fabrication capabilities in India, Vietnam and China. In September we also announced that we have established a new R&D-centre in China (Sapa Technology Shanghai). By utilizing the experience and technical knowledge in Sapa, new solutions will be brought to the Asian markets, benefiting both our local and global customers.

With our network of plants, our R&D capabilities and our local and global sales-organisations, Sapa is in a unique position to serve both local and global customers with value enhancing solutions. There are many examples of how we deliver value to our customers every day. In this issue of Shape Magazine you can among other stories read about our co-operation with the Truck & Trailer-suppliers in North America, where Sapa utilises our entire network of plants to serve these big national accounts.

I think Sapa is heading towards a very exciting future. We have unmatched capabilities globally to meet our customers' needs and we have solid programs in place to utilise our size and capabilities even further.

I believe that Sapa is shaping the future!



Svein Tore Holsether
Svein Tore Holsether,
President & CEO Sapa

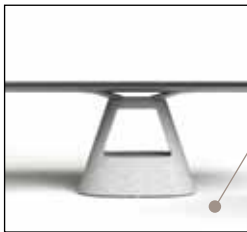
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The North American truck trailer market is rebounding after the 2009 global recession. New trailer construction was up 109 percent in the first quarter of 2011 compared with the same period of 2010.



Meet Dave Humphries, Sales Director of Sapa Profiles UK, who has worked in the business for 35 years. "Extrusion applications are limitless," he says.



Aluminium alloys have an extraordinary ability to absorb impact energy. Sapa now offers this expertise and range of customised extrusions for automotive applications.



The German designer Konstantin Grcic was this year awarded the "Red Dot: Best of the best" for his Table B. Sapa had a role in the creation of this successful work of art.



Broadcasting Place in Leeds has benefited from the fenestration system produced by Sapa Building Systems Ltd, and was recently awarded "World's Best Tall Building".



Sapa is an international industrial group that develops, manufactures and markets value-added aluminium profiles, profile-based components and systems, and heat exchanger strips in aluminium. Sapa has annual sales of approximately SEK 32,995 billion and around 14,800 employees in companies throughout Europe, and in North America, Central America and China. Shape is the Sapa Group's customer magazine, and is issued twice annually in 15 languages. Shape is also available at www.sapagroup.com

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sapa:
 Shaping the future

KEEPING COOL FOR LONGER LIFE

Light-emitting diodes (LEDs) come as a welcome relief as much of the world is looking for ways to reduce energy. Aluminium extrusion plays a key role in the heat sinks necessary for cooling LEDs.

According to the US Department of Energy, solid-state lighting, which includes LEDs, has the potential to reduce lighting energy use in the US by one-third. This translates to the equivalent of saving 348 billion kilowatt hours annually – which in turn saves money.

“Cost savings are significant,” says Ruben Guillermo, Global Key Account Manager for market area Thermal Management. “There’s about a 50 percent cost saving in operations, which is why LEDs are being used more.”

LEDs are used not only in lighting, but in medical equipment, vehicle interiors, signage and more. In order to enjoy long life, as high as 20 years, LEDs need to dissipate the heat they generate through a heat sink, a component that transforms heat from a solid material into a fluid medium such as liquid or air.

SAPA PRODUCES ALUMINIUM extruded heat sinks which provide superior heat transfer performance compared to traditional die cast heat sinks. A Sapa case study revealed that extruded aluminium heat sinks provide a 30 percent weight savings and a 12 percent temperature reduction over heavier die cast sinks.

Light weight is especially advantageous for outdoor lighting as many assemblies are suspended in the air, for example in parking garages. “With lighter, smaller heat sinks you can actually fill the same void or spot with only half or a quarter of the size of the original lighting assemblies,” Guillermo points out.

OTHER ADVANTAGES OF an extruded aluminium heat sink are its environmentally friendly reusable material, shorter lead times, improved surface quality and highly integrated designs. “We can give customers an efficient, very light heat sink that functions as a thermal cooling and also offers unique features, a more attractive look and a smaller size than the other heat sinks out there,” says Guillermo.

Only copper is superior to aluminium extrusion, but it is also three times the price, he adds.

For each thermal solution, Sapa engineers provide customers with computational fluid design (CFD) models to validate a heat sink while it is still under design and industrial review. This is done to ensure that a heat sink meets the customer’s requirements for design, surface treatments and functionality. Sapa also ensures more effective design disciplines to an assembly by eliminating the need for additional downstream processes.

Sapa is able to respond quickly to customer demands by keeping inventory on hand. “There is a lot of volatility in the US market and quick response is critical due to legislation, timing and the political process,” says Guillermo. “We have been able to help customers respond to requests for LED heat sinks in just four weeks or less, whereas others take six to eight weeks.”

With thirty million street lights targeted for conversion from fluorescent to LED lighting in the US alone, it can’t hurt to speed up the process.

TEXT CARI SIMMONS



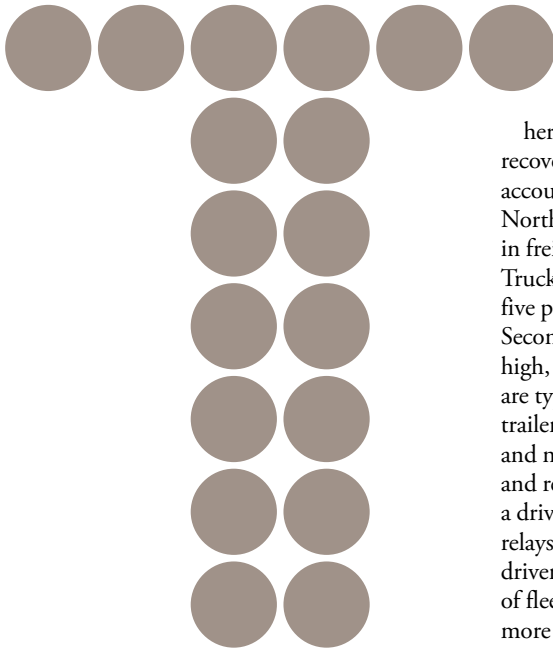


**NORTH
AMERICAN
TRUCK TRAILER
MARKET HEATS UP**



The 2009 global recession rocked business and economies around the world. **But the North American truck trailer market** is rebounding with verve: new trailer construction was up 109 percent in the first quarter of 2011 compared with the first quarter of 2010, and the outlook remains bright.





here are three main reasons for the quick recovery,” says Jerrod Hoeft, director of national accounts for transportation, Sapa Profiles North America: “The first is a general upswing in freight and truck tonnage in North America. Truck tonnage in 2011 has increased by about five percent so far over the same period in 2010. Second, the age of trailers in use is at an all-time high, and they need to be replaced. Trailers are typically replaced after five to six years, but trailers on the road today are between eight and nine years old. Third, a shortage of drivers, and regulations regarding the number of hours a driver may drive in a day, are causing more relays whereby a trailer gets dropped off by one driver and picked up by another. Since the goal of fleets is to always have freight in motion, more trucks and trailers are needed.”

As the leading supplier of aluminium extrusions for the North American truck trailer market, Sapa is benefiting from this growth. Sapa has sixteen manufacturing facilities in North America, located close to Sapa customers, and the capacity within this network to serve customers of all sizes. In addition, many of the plants are dedicated almost solely to the transportation and trailer market. Sapa has, consequently, developed a high level of competence and technical knowledge to serve this market.

ED DZIEZA, senior purchasing agent for Great Dane Trailers, says: “We have some extrusions that only Sapa can provide or that would be very expensive for someone else to produce. Sapa is also big enough to supply all my needs.”
Sandy Kim, assistant manager for procure-

RECOVERY WITH BITE

The 2008 global recession hit the transportation industry hard. But today's truck trailer market is on the rebound. First quarter market growth for 2011 (compared to previous year) for 48–53 foot trailers:

198 %

Dry vans
Up approximately 198 percent

33 %

Refrigerator trailers
Up approximately 33 percent

83 %

Platform/flatbed trailers
Up approximately 83 percent

Source: ACT Research



ment at Hyundai Translead notes that “some shapes can be difficult to manufacture. If you need a special thickness or a special width that the local plant can’t handle, Sapa is sure to have a facility elsewhere that can do the job with the same level of quality: You don’t have to worry if the part comes from another Sapa facility.”

In coming months, Hoeft believes service will be the critical factor for continued success. “At the moment, we’re experiencing unprecedented demand for better and better service and qual-

ity, and increased competition. We also know our partners must get trailers to transportation fleets on time, every time, with the highest quality extrusions. Current conditions are putting us to the test. But, fortunately, we are always striving for improvement, and our track record is good.”

OUTSTANDING, SOME MIGHT say. “Sapa is excellent about meeting our needs and communicating with us,” says Kim. “They keep me notified of

possible problems so I can plan accordingly. They’re one of my best vendors. I love working with them!” Dzieza adds, “In an emergency, Sapa can get finished product to us in just a couple days. That’s amazing! Their service is phenomenal! They’ve set the industry standard and have the bulk of my extrusion business now. Sapa and Great Dane have a strong partnership, and the end result is better service and products for Great Dane customers.”

TEXT MICHELE JIMÉNEZ

“When you have a circle of people you know and trust doing the work, you don’t want to change it. Sapa is a part of our circle.”

Ed Dzieza, senior purchasing agent, Great Dane Trailers





Lithuanian 3D success

The complicated name would be stereophotogrammetry but 3D laser scanning is easier to understand. That is the field where Lithuanian company Elinvision has now earned international recognition. Designing and manufacturing measuring and control devices, vision processing systems and 3D scanners since 2000, Elinvision is winning market shares with its new 3D foot scanner for orthopaedic applications. A 3D foot scanner replaces the messy and time-consuming casting method that even required casts and moulds to be shipped around. Now the patient puts a foot in the scanner box and the specialist gets a perfect 3D copy of it (with full, partial or no weight at all) to be handled digitally.

A year after the launch of their first scanner, Elinvision is now working on a less sophisticated model to broaden its market. "Sapa has been very helpful when developing the profiles for the casing of the first scanner and we count on their advice for this new series," says Donatas Valincius, general manager at Elinvision.



Charles Martin Hall and Louis Toussaint Héroult almost simultaneously discovered the smelting process to produce aluminium.

Happy birthday aluminium

This year marks the 125-year anniversary of a discovery, which enabled the production, and the use of aluminium on an industrial scale. The discovery has not only improved our lives, but plays an eminent role for Europe's sustainable development. Safer and more fuel-efficient transportation, energy efficient buildings, infinitely recyclable packaging – all have been possible thanks to this discovery.

The smelting process to produce aluminium was discovered almost simultaneously but independently in 1886 by Charles Martin Hall in the United States and Louis Toussaint Héroult in France. Both men dissolved aluminium oxide in molten cryolite and then extracted the aluminium by electrolysis.

"No material other than aluminium can combine the advantages of being light and strong, totally recyclable, resistant to corrosion, completely impermeable, and an excellent conductor of heat and electricity. In the 125 years since this discovery, the variety of applications for aluminium has grown apace and will continue to contribute to sustainable development and energy efficiency gains in Europe," declares Patrick de Schrynmakers, Secretary General of the European Aluminium Association (EAA).



Timeless design for weather protection

KuPro Kunststoff 2000 GmbH, a German manufacturer of doors, balcony enclosures and facade systems for family houses, has launched a new line of arched carports. The Vaganza® series – with an unsophisticated and timeless design – combines an extremely long life with a great variety of colours and models.


"Aluminium profiles have given us the flexibility to build in different sizes and attractive shapes, and in combination with plastic

coating offer a very nice finish as well as superb weather resistance," explains Torsten Moldenhauer, product manager at KuPro. "And through its calculation and manufacturing skills, Sapa has helped us to materialise our visions," he adds.

According to Moldenhauer, aluminum profiles are set to increase their share of the market since aluminium is a material that appeals both to the general public and manufacturers.



With **perfection** in sight

 A very experienced Swedish instructor wanted to make the shooting process easier and more accurate.

He was thinking of a shotgun sight that helped shooters to obtain the best possible start image of the target to allow them to easily swing the shotgun until the firing point.

Two years and three world patents later, Redring® is helping shooters in 40 countries around the world to improve their hit rate and hunters to minimise their

risk of injuring the game. The idea was deceptively simple: spot metering the target and calculating the shot or bust diameter at 20 metres, a bright sharp red ring shows you when it is time to shoot.

A set of light, highly precise and perfectly finished extruded aluminum profiles from Sapa build the casing of the Redring® sight that in a couple of minutes can be ready to use in practically any kind of shotgun on the sport market.



Cooling is a hot market

Zhejiang Kangsheng Co, a Chinese manufacturer of heat exchange systems for home and industrial applications, is a growing star in the competitive and ever-expanding HVAC (heat, ventilation, air conditioning) world market. With expected sales for 2012 exceeding USD 15 million, its refrigeration and air conditioning parts are used by Chinese and international giants such as Hisense, Midea, LG and Electrolux and its products are shipped to South Korea, Australia, Indonesia, India, Mexico, Turkey and many other countries.

Investments in R&D as well as a brand-new brazing unit have allowed the company to reach the highest standards of quality, reliability and efficiency in

the manufacturing of aluminium cooling components. And Sapa, which has gone from zero to 500 tons of aluminium clad fin supplies within 10 months, seems to fit well in those efforts. "This market is just booming and Sapa is a trusted supplier, with a perfect management system and excellent quality," says Kyon Ma, general director of Zhejiang Kangsheng. Song Zu, at SAPA Heat Transfer in Shanghai, is very satisfied. "We have just entered the HVAC market in China through innovative technology and we aim to help our customer to success. It is the only way to our own success."



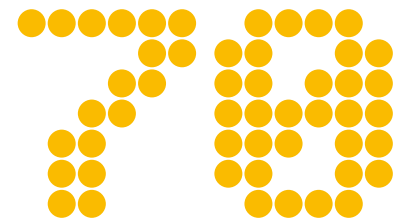
INTELLIGENT shop solutions

Did you know? Aluminium can be recycled infinitely without loss of quality and has impressive recycling rates: over 90 per cent in transport and building applications and more than 55 per cent in packaging, with some countries exceeding 90 per cent for beverage cans.

They are light, neat, flexible and easy to configure. Shop Solution's aluminium shelving systems were created with that in mind. Jorma Rissanen, the founder of this Finnish company, started supplying shelving solutions to a famous Finnish cosmetic brand which always needed to display its products in the same grand style no matter where and under which circumstances.

From there, the step was not long to expand to the pharmacy sector where small items also have to be shown to customers in an orderly and clean manner.

"Working together with Sapa we developed a number of smart profile solutions that are the core of our systems," recalls Rissanen. His company can tailor-make solutions integrating glass, wood and other materials but the system is completely built on aluminium profiles and panels. After the first installation by Shop Solutions the store's staff can easily change the settings and renew the look of the shop as required.



Over the past century, energy consumption per unit of aluminum produced has declined 70 per cent.

Know-how in many languages

Sapa has launched an updated version of its Design Manual with technical data, guidelines and practical tips regarding aluminium profiles. This popular handbook has not only been used by designers and engineers but has also been a reference source at technical colleges and universities since it was published for the first time back in the 1980s.

The updated Sapa Design Manual includes the last technical news from the world of aluminium, including material properties, processes, technologies and environmental aspects. It is available in print in various languages and an online version is under development.



LET THERE BE LIGHT

We don't sell just products and components; we sell solutions," emphasises Francesco Natale, commercial manager for Sapa's market area Solar in Italy. Sapa Application Centre Italy, which employs five engineers, and the Sapa sales team work closely with Sapa customers to develop customised aluminium structures, innovative PV frames and dedicated inverter heat sinks. "We are the only extrusion company in Italy that offers a total approach – from design to logistics – and customers are willing to pay for this," says Natale. "It saves them time, money, and headaches!"

Thanks to a government subsidy programme initiated in 2007, and recently renewed until 2016, Italy's solar business is especially bright.

In Italy, as elsewhere, energy derived from photovoltaic (PV) cells is relatively expensive compared to energy derived from oil. But Italian solar producers are working hard toward 'grid parity' whereby the cost of solar equals the cost of oil. "As competition within solar increases and installation costs decrease, we are getting closer to parity, which I hope we'll achieve in about two years. After that, with Sapa's total approach, we'll be in great shape: Italy has lots of sunshine!"

TEXT MICHELE JIMÉNEZ

"We don't sell just products and components; we sell solutions."

SAPA SHINES THROUGH

When Mazzanti S.p.A., a construction company that also installs electrical and PV systems, needed a sunshade with integrated PV panels for an industrial warehouse roof, they compared a galvanised steel structure with a Sapa light solution.

Sapa's advantages:

- Structurally simple: one bent profile instead of multiple welded parts
- 41 percent lighter than original steel design (65 tonnes v. 110 tonnes)
- Final installed power (1 MWp–1.2 MWp) 20 percent higher than that of steel estimate, due to large PV panels
- 20 percent faster installation than steel estimate
- Maintenance free – no welding to inspect

In terms of panel performance, shade effect, and roof surface exploitation, Sapa was the clear winner and the customer's final choice.

ENDLESS EXTRUSION POSSIBILITIES

Sales Director Dave Humphries gets a kick out of collaborating with customers and turning visions into reality.

DAVE HUMPHRIES KNOWS aluminium inside out. The Sales Director of Sapa Profiles UK has worked in the business for 35 years, starting out as an apprentice with British Aluminium. Although trained as an accountant, a job offer came along and he found himself working in sales “quite by accident.”

After working for Hydro Aluminium Extrusion in the UK and in Norway, he moved to Sapa in 2005. Extrusion applications are what got him interested in the industry initially. “Extrusion applications are limitless, and getting over the conservatism of people used to steel is always a challenge,” he says.

Humphries’ history in product development started back in the 1980s

and his first major achievement was to convince the UK road transport industry that tail lifts could be made from aluminium instead of steel. “We went to the biggest manufacturer in the UK with a design in aluminium that we believed met their specifications. They said it wouldn’t work because there was no welding involved.”

Humphries offered to make a prototype that they could run through their trials and told them to contact him if they liked the test results. They liked them – a lot. “Within three years’ time, every one of their tail lifts was made of aluminium, adding up to 500 tonnes a year,” he says. The competition quickly followed in their footsteps.



“Trust breaks down a lot of barriers and this leads to finding the optimal and best solution.”



More recently, Humphries recognised an opportunity to supply the Middle East with walkway covers in anodised aluminium instead of traditional plastic. After 18 months of detailed development, the covers are currently being delivered in containers to be assembled on site.

While he truly believes in the benefits of using aluminium, Humphries also insists on telling customers when it is not the best solution for their application. “By understanding what is commercially viable and getting to know our customers and potential customers’ businesses well, we can make a value judgement between competing materials and help them make the right decision,” he says. This helps create an environment of trust which he believes is the single most important factor between a supplier and its customers. “Trust breaks down a lot of barriers and this leads to finding the optimal and best solution. It takes time to earn it, but once you have that trust there are endless possibilities.”

THE SAPA PROFILE ACADEMY, which he started in the UK in 2009, is also built on “endless possibilities” in extrusions. The two-day event for customers and designers is geared towards industries that might benefit from the use of extrusions. In addition to workshops, participants from the different industries have an opportunity to share insights and experience with each other, something which Humphries says has been a real success. “We were

over-booked for the second Profile Academy, which basically came from recommendations after the first one.”

Such activities are very satisfying for the UK sales director who says that the best things about his job are working in an environment where people are empowered and motivated at work – and breaking through with customers and their solutions. “I get a huge amount of satisfaction in building relationships with customers and developing new products with them,” says Humphries. “If you can be part of the invention process then you can make a difference to what the future holds.”

TEXT CARI SIMMONS PHOTO MATTHEW SEED

Dave Humphries

Age: 53 **Family:** Wife and 27-year-old son **Home:** Lives in the countryside near Worcester, England **Pastimes:** Fishing, nature, birds and wildlife – “I sound like my father!” **Sports:** Played semi-pro football and today likes golfing and snowboarding with his son. **Favourite authors:** Harlan Coben and James Patterson for escapism **Favourite quote:** The only way to predict the future is to invent it.

Colourful warmth

When it comes to home improvement, Swedes are investing with enthusiasm in bathrooms and kitchens. And many are realising dreams of hi-tech appliances in techno-chrome or clinic-white. But Pax, a Swedish manufacturer of heat and ventilation products, has noticed an increasing demand for more joyful, colourful products.

Colourful as well as advanced environmental design is the concept behind the new Pax Colour Line of towel rails, a sparkling first in the market. Among bathroom towel driers/ heaters, chrome is still king but the new aluminium rails, extra-light anodised profiles from Sapa, are set to be a best-seller with their colourful design and extreme low energy consumption. Black, blue, yellow or red? Your choice.

75 per cent of all aluminum ever smelted is still in use.



Breakthrough in the Swedish equestrian field

Indoors horse riding is for many enthusiasts the best way to endure a long and severe winter. Indoor riding schools and arenas are nothing new in a country like Sweden. Most of these buildings are quite old plain wooden constructions that keep the weather as well as the scarce winter light out.

But a private horse riding arena in Billinge, Sweden, where the architect sourced natural wood, aluminium and glass to create a light and open atmosphere – gives the riders a taste of the outdoor experience. In order to catch as much sun as possible without letting the massive roof overshadow the surrounding buildings, the field was sunk one metre to ensure the desired spaciousness.

Sapa Building System's insulated 4150 glazed façade and 1074 window systems contribute to give indoor riders a good view of the world outside.

Where functional design meets material expertise

It is often said in the design world that form follows function. **This includes material choice.**

The form follows function truism can also be applied to automotive design and to aluminium extrusions used in the front end of a car. "Actually," explains Dirk Schneider, global accounts director for automotive applications for Sapa Profiles, "as metallurgists know, when we say 'aluminium', we really mean aluminium alloys."

"Aluminium alloys in proportion to their weight have an extraordinary ability to absorb impact energy smoothly and predictably," says Mat Vestjens, extrusion technology manager for Sapa Profiles Hungary. Depending on their formulation, aluminium alloys do not necessarily break upon impact at high speeds. They can be designed to fold and thereby absorb much impact energy that would otherwise harm vehicle passengers. This makes them a highly desirable construction material when it comes to automotive design and driver and passenger safety.

"**SAPA HAS A LONG** history of developing crushable profiles," says Wout Polderman, technology manager for Sapa Profiles Netherlands. "Sapa, as Alcoa Extrusions, produced its first customised auto body extrusions in the 1990s for Audi and Ferrari. Over the years, our knowledge in impact energy management has continued to grow." Sapa now offers this expertise and range

of customised extrusions for automotive applications with three classifications – Crash Alloy Formulas 200, 240 and 280.

These extrusions can be found in the Aston Martin Rapide, the Audi A8, R8, and TT, and several other car makes and models. Crash Alloy Formulas 200, 240 and 280 are Sapa's total solution approach to vehicle design for ideal crash behaviour. It is where functional design meets material expertise.

TEXT MICHELE JIMÉNEZ

Magna International

Car manufacturers often outsource production of automotive components, systems, modules and, in some cases, entire vehicles to global automotive suppliers such as Magna International.

- Magna is the world's largest automotive supplier: 263 manufacturing facilities and 84 product development, engineering and sales centres in 26 countries on five continents.
- Supplies content to virtually every automotive manufacturer for every major brand around the globe.
- Uses Sapa's Crash Alloy Formulas 200, 240, 280 in body structure of Mercedes-Benz SLS. Other car manufacturers use the Crash Alloy Formulas 200, 240, 280 for Aston Martin Rapide, Audi A8, R8, TT and in other vehicle makes and models.





Sapa's Crash Alloy Formulas 200, 240, 280 can be found in the body structure of a number of cars, including the Mercedes-Benz SLS.



Designer Konstantin Grcic's Table B was this year awarded the "Red Dot: Best of the best" in one of the world's most prestigious product competitions.

BEST OF THE BEST

Konstantin Grcic's **Table B**, an acclaimed success of Spanish Bd Barcelona Design, pushes the envelope in aluminium profiles combining **function and beauty**, solidity and lightness.

GERMAN DESIGNER KONSTANTIN GRIC had a fancy for aluminium profiles. "I had been longing for years for an opportunity to work with aluminium extrusions - an industrial technology which combines superior structural properties with an elegantly sleek aesthetic," he says. Grcic found inspiration in earlier classic works from BD - such as the Hipóstila shelf by Clotet and Tusquets - for a very thin table board in extruded aluminium.

His wing-like table seems to set a new standard in terms of high-end aluminium design. For starters, the influential Wallpaper magazine awarded Konstantin Grcic "designer of the year 2009" and in 2011, Table B was awarded the "Red Dot: Best of the best" in one of the world's most prestigious product competitions.

This up to five metre long table, standing on solid oak, stainless steel or artificial stone, is a deceptive piece of design. Its shining and clinically smooth surface hides a complex technical

development in which senior engineers have been involved.

"I wouldn't call this table minimalist, I would rather talk about simplicity," explains Grcic whose earlier creations have made it all the way to the permanent collections of New York's MoMA, Paris' Centre Georges Pompidou and Munich's Die Neue Sammlung, among others.

Sapa had a role in the creation of this successful work of art.

Josep Maria Porqueras, at Sapa's Application Center in Barcelona, describes the cooperation with Konstantin Grcic and the BD-team as warm and inspiring. "They came with this idea and there was very little room for compromise in terms of shapes, surface and looks," says Porqueras.

IN MANY WAYS, TABLE B was an exciting challenge for Sapa. The table consists of four 300 mm profiles that fit with total flatness and keep a perfect shape on sides and ends. The tuning of

the extrusion was crucial to achieve a perfect finish.

Konstantin Grcic said once that his objects are constructed and not sculpted. "There is no pre-existing block but there are many pieces. That is the thread that connects all my projects: I take one piece, then another, then another and I build something", he said.

This time those pieces were of aluminium.

TEXT ERICO OLLER WESTERBERG

The designer, company and award

Konstantin Grcic was born in Munich in 1965 and has a Masters in Industrial Design from the Royal College of Art in London. Many of Konstantin Grcic's products have received international design awards. (www.konstantin-grcic.com)

Bd Barcelona Design, probably the Spanish company with the highest prestige in design, was founded in 1972 originally as a vehicle for the production of items of furniture and accessories which could not be found in shops. (www.bdbarcelona.com)

Red Dot: An internationally recognised quality label for excellent design that has existed since 1955. It is awarded by the German Design Zentrum Nordrhein Westfalen.

"I wouldn't call this table minimalist, I would rather talk about simplicity"

UPGRADING TO MEET DEMAND

Big things are happening in small-town America, where Sapa Extrusions Cressona is **rapidly stepping up capacity**.



Sapa's Cressona, Pennsylvania plant is vast – and growing. North America's largest common alloy extrusion facility consists of thirteen buildings with an area of 1.5 million square feet spread over 100 acres of land. Such capacity is necessary to house 8 presses up to 6,000 tons, which can offer the largest circle size and alloy diversity available in North America.

One of the more recent press additions is a 3,600-ton UBE direct extrusion press that extrudes 10 inch diameter billets. Installed last year, the UBE press enables the production of small and intermediate-size hollow shapes suitable for a variety of industries and consumer products.

In October, a USD 10 million cast house expansion was completed. This adds an additional 100 million pounds (45.5 million kilos) of capacity to Sapa's North American casting operations which also include cast houses in Spanish Fork, Delhi, Yankton and Toronto, Canada.

"Now we can offer a completely integrated casting to fabricated end products, all under one roof," says Cressona's plant manager Richard Worst. "This gives us more control over alloy formulas

and enables us to respond quicker to customers' needs." The new casting equipment, such as a single holder, single melting pit dedicated to specialty alloys, will allow the development of innovative new chemistries. This will provide enhanced features for customers such as smaller run sizes with simpler changeovers.

As the demand for billet increases, North America is facing a tighter supply. The Sapa expansion is one step towards addressing this lack of aluminium billet. "The economy is growing and business is expanding," says Worst, explaining where the demand is coming from. "The recession is over."

For customers in search of competitively priced products – and for those working in Cressona where Sapa is the single largest employer, this is very good news indeed.

TEXT CARI SIMMONS

Small business – big sales

Steelman, a small family business from Estonia, has a very long product list. They are currently the country's leading manufacturer of aluminium framed cupboard doors but, by making intelligent use of aluminum profiles, they are also established suppliers of screens and partition walls, shelves, doors, tables, frames and furniture components.

According to Uku Suitso, founder and owner of the company, Steelman is successful partly because of its size:

"In a constantly changing market, a small company has the flexibility to deal with changes." But with a staff of five, three of which are family, Steelman relies on the expertise of Sapa to develop new or existing products.

"If we are leaders in some fields it is not because we are cheap but because of the design and the quality of our products," says Uku Suitso. "And that is something we couldn't have accomplished without the help of Sapa."



Swedish style building products

Skånska Byggsvaror – Building Products from the South of Sweden – is a very Swedish company. It combines low prices and high quality with smart design, flat packaging and the kind of do-it-yourself approach that is familiar to this country. The company has no retail stores, just a showroom, and in 2010 has sold building products for more than SEK 400 million through popular catalogues and a website.

"It is hard work to offer low prices," says Tina Dalemo at Skånska Byggsvaror. "You have to cut costs at every possible stage of the chain without compromising quality. We have very high quality standards and our customers rely on our products as a solid investment," she says.

Sapa has supplied aluminum profiles to Skånska Byggsvaror since 2006, for a variety of products, among them their popular conservatories. "We have a very demanding procurement policy and we are constantly monitoring the market. But Sapa is a good fit for us, offering good volume prices and the high quality standards that we demand," says Tina Dalemo.

Did you know? Almost three-quarters of all aluminium ever manufactured, 700 million tonnes, is still in use thanks to its long life cycle (10 to 20 years in transport and up to 50 to 80 years in buildings) and recyclability.

GOALPOSTS STEAL THE SHOW!

In 2008, Poland defeated Georgia at the Kalisz Arena in Kalisz, Poland in the final match of a **world handball tournament** celebrating ninety years of handball in Poland. Although spectators wildly cheered the victorious home team, the **real stars of the show** were the Interplastic-Sapa goalposts.

"KEY EUROPEAN AND world handball federation officials enjoyed the match, but they were especially impressed with the goalposts!" says Roger Żółtowski, owner of Interplastic, a Poland-based sports equipment manufacturer and distributor. After the tournament, International Handball Federation (IHF) officials complimented Interplastic on its handsome yet ingenious goals and encouraged the company to fine-tune the goals to achieve IHF certification, which was received in 2010.

THE 3 X 2 METRE COLLAPSIBLE aluminium goals are made of 80 x 80 millimetre Sapa aluminium profiles, in accordance with PN-EN 749 functionality and safety standards for handball goals, with internal ribbing to prevent distortion. They feature a specially-designed aluminium connector that allows them to be folded for easy storage and transport. Designers have also

improved the durability of goalpost markings. Instead of using stickers, which can be easily scratched and damaged, goalpost stripes have been applied as a powder layer coating.

THE IHF-CERTIFIED GOALS also performed spectacularly at the 22nd Handball World Championship in Sweden in January 2011.

"It was noted at the last minute that the goals to be used at the 2011 Championship were not IHF-certified so we were asked at short notice if we could provide IHF-certified Interplastic goals," says Jan Żółtowski, Interplastic managing director. "Unfortunately, Poland did not win the championship, but Interplastic-Sapa technology saved the day."

Interplastic handball goals are internationally recognised and can be found at all levels of training and competition.

TEXT MICHELE JIMÉNEZ



Interplastic handball goals can be found at all levels of training and competition.

Other Interplastic-Sapa successes


Football goals: 120 x 100 millimetre collapsible aluminium profiles

Mobile field pitches: portable, multi-function pitches comprised of 80 x 80 millimetre and 80 x 40 millimetre aluminium profiles with removable hasps for net attachment



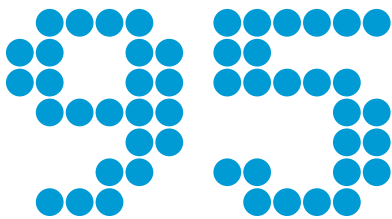
The IHF-certified goalposts from Interplastic were used at the Handball World Championship in Malmö, Sweden, in January 2011.

Sapa network builder received **talent award**

 Jan Weier was attending a wind energy congress in Brussels when he got a call from the Danish Wind Industry Association (DWIA). He was then a key account manager at Sapa Profiles Denmark and was promoting the use of aluminium profiles in the windpower sector. He didn't know his name had been submitted to the association's Talent Award 2011 and was very surprised to learn that he was a finalist.

With this annual prize focused on human resources, DWIA wants to encourage young managers in the industry. The nominees must have shown extraordinary performance, be a good role model and have future potential.


Jan Weier eventually won the award and, as part of the prize, will be attending management courses at the end of the year. He has now a new job within Sapa and moved to the global scene. Considering the award motivation it seems to be a good move: "Jan Weier is an ambitious initiator who always strives to be the best. He thinks global and thinks big which has resulted in many international contacts."



Aluminium recycling saves up to 95 per cent of the energy used in the primary production.



Unique lighting for offshore platforms

 Technor Benelux B.V., located in Spijk, the Netherlands, has developed a sealed for life, 80.000 hours maintenance-free lighting fixture, suitable for use in hazardous areas such as offshore platforms and refineries with a 10-year warranty using an aluminium alloy housing manufactured by Sapa.

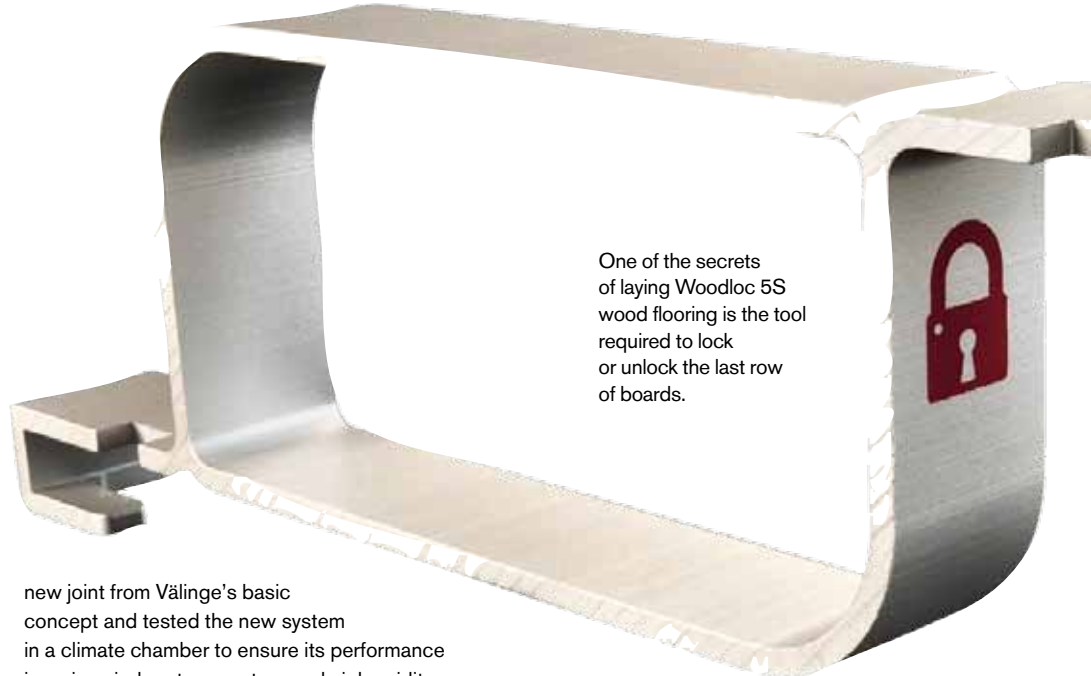
For this unique luminaire Technor Benelux B.V. got in contact with Sapa Netherlands in 2008 for evaluating the aluminium for the housing. "The flexibility, quality and support given by

Sapa were highly appreciated from the start," says Marcel Gelux, manager at Technor Benelux. Applications for offshore platforms – with an aggressive salty environment – have very high requirements in terms of quality and safety. In the past, aluminium was not considered the best material for these severe conditions but thanks to a special seawater resistant aluminium and anodisation, Technor Benelux is now able to deliver to its customers a safe and reliable product with an extremely long life.

The tool for easy floorlaying

Kährs' latest milestone in wood flooring is the launch of Woodloc 5S – a further development of the successful Woodloc system, which revolutionised the flooring market in 2000. A new joint allows Kährs' wide range of wood flooring to be laid even more quickly and easily and also on larger areas without an expansion joint.

With sales in more than 50 countries worldwide and a turnover of nearly EUR 150 million in 2009–2010, AB Gustaf Kähr has developed the



One of the secrets of laying Woodloc 5S wood flooring is the tool required to lock or unlock the last row of boards.

new joint from Välinge's basic concept and tested the new system in a climate chamber to ensure its performance in various indoor temperature and air humidity conditions.

One of the secrets of the quick and easy installation is a sliding locking tongue in the transverse joint that locks the boards. But you need a tool to lock or unlock the last row. "We first intended to make the tool in high-density plastic but switched

aluminium for a longer life," explains Kährs product manager Ingemar Fredricson. "We began sketching the tool and Sapa partially redesigned it and found the best method of manufacturing it."



UK BUILDING WITH SAPA SYSTEM WINS World Best Tall Building

Recently awarded the accolade of "World's Best Tall Building", Broadcasting Place in Leeds has benefited from the specialist fenestration system designed and produced by Sapa Building Systems Ltd.

The competition was organised by the Chicago-based Council on Tall Buildings and Urban Habitat, with Broadcasting Place beating off stiff competition including Dubai's Burj Khalifa, the world's tallest building.

A mixed use development for Leeds Metropolitan University, the apparently random patterns were composed to ensure that the vertically modulated cuts provided an orientation-specific balance of daylight penetration and solar gain reduction. The result is a building with irregular sides which maximises natural light without creating overheating.

The design of the glazing system was chosen to complement the dramatic aesthetic of the Corten steel panels.

"Sapa's Dualframe Window Wall system allowed us to fully realise this apparently random window

pattern," said architect Simon Carter of Feilden Clegg Bradley Studios, London.

For the majority of the lowest two levels of the building an Elegance 52 SX curtain walling system was specified, including a long-span system with two-storey integral steel mullions which form a dramatic enclosure to the Baptist Church which is housed in the building.

"Overall, the quality and detailing of the Sapa systems have helped to complement our vision for the architecture of the scheme," said Simon Carter.

The £50 million Broadcasting Place scheme comprises approximately 110,000sq ft of teaching and office space as well as a church, a café and exhibition, and 240 student bedrooms and post graduate studio accommodation and offices. The development safeguards the preservation of the historic Grade II Listed Broadcasting House, as well as creating a new Baptist Church for the local community.



SAPA AIMS AT NEW PRODUCT

A new air rifle that performs **beautifully**. Meet the Walther LG400, a new application for Sapa extrusions.

Visit any village in Germany or much of continental Europe and you will probably find a local shooting club. "Air rifle and air pistol shooting is a very popular sport," says Thomas Bretschneider, head of Sports Development for the Carl Walther company.

But finding a gun that adequately complemented one's own shooting style was an ongoing challenge for shooters who vary tremendously in body size, arm length, and grip strength.

"We recognised the problem and set out to design a new air rifle that was adjustable to any body size and shooting style," says Bretschneider. "We wanted the gun to fit the shooter, not the other way around."

SAPA HEARD CARL WALTHER was redesigning its popular and highly successful LG300 sport air rifle and approached the company about cooperating. "Top quality, high performance air rifles often have aluminium components," explains Jürgen Schulz, key account manager for Sapa components in northern Germany. "We thought this could be an interesting product for

Sapa extrusions so we sent some sample surface treatments to Carl Walther. They liked what they saw."

The rifle, which took two years to develop, was launched in 2010. In addition to the gun's brushed aluminium surface, Sapa fabricated four interconnected components that comprise the rifle's stock and contribute to its overall adjustability. "Tooling and milling were a challenge," admits Schulz, "because rifle components involve a lot of detail and must fit together perfectly. They were not your typical extrusions."

BUT CARL WALTHER had no doubts about its choice of partner. "We chose Sapa," says Bretschneider, "because we knew the company had the necessary expertise for each step of the process – alloy composition, profiling, computer numerical controlled (CNC) machining, anodising, and printing. We were confident Sapa would deliver excellent components."

"It's an interesting product for Sapa," concludes Schulz. "Successful companies need a mix of products for financial stability. We're pleased to be working with Carl Walther!"

TEXT MICHELE JIMÉNEZ



The Walther LG400 air rifle

- Smooth shooting, no shaking
- Short shot development time
- Loading status indicator
- Precise pellet guidance
- Loading lever: left-hand/right-hand positioning
- Clean valve at all times
- Dry-practice trigger
- Fully adjustable aluminium stock