Revolution in profile bending

Andrénverken keeps it local

LVD’s new line of tube lasers

“As flexible as possible”
A family-owned business thrives
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*Editorial Note: Let us know what you think of this issue of Discovery. Share your thoughts at marketing@lvd.be or connect with us on social media. For information about products you see in this issue or to find your local LVD contact, head to www.lvdgroup.com.*
Dear reader,

LVD makes smart manufacturing possible.

On the pages that follow, learn how we’re raising the bar on bending technology with an expanded press brake line and a revolutionary new solution for large profile bending. Also, how our new tube laser cutting machines give fabricators more choice.

In our feature articles, find out how LVD helps Swedish subcontractor Andrénverken use advanced technology to its fullest, and how we marry our family business, family values approach with that of our customers, like Germany’s Hofmann Blechbearbeitung.

In every issue of Discovery, we spotlight the people behind our innovation – skilled, motivated and invested in serving you.

Continual innovation that challenges convention and delivers the technology for higher productivity and better process flow – that’s what fuels LVD. Keep reading to discover more.

Carl Dewulf
President & Managing Director

“With the tridem press brake we can double the production of lighting poles.”

“Travel around the world with us as we catch a glimpse of some recent installations.”
**Tooling essentials**

When it comes to press brake tooling, it’s important to select “the right tool for the job.” To meet customer requirements, our engineers have optimised the shape of the upper and lower tools and introduced new section lengths for segmented tooling. LVD’s new tooling catalogue, Tooling Essentials, reflects all of these changes with enhanced drawings and detailed information on our standard tooling for press brakes from 12 to 3000 tons, single, multiple and adjustable V-dies and configure-to-order tooling.

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**Stay connected - LVD Insights**

Keep in touch with LVD through our newly launched e-newsletter, LVD Insights. Learn about our latest products, upgrades and enhancements, get news about upcoming tradeshows and events, as well as special offers and other news and insights. We invite you to connect with us. Register for LVD Insights on our website at LVDgroup.com or contact your local LVD subsidiary or agent.
Close to our customers

Three new regional support centres in North America mean better support at the local level. The centres are strategically located: A Midwest support centre in Minneapolis, Minnesota is open; two additional support centres in Charlotte, North Carolina and Dallas, Texas to assist customers in the Southeast and Central/Southwest areas will open later this year.

A regionally-based team of factory-trained service technicians will ensure prompt response to on-site service requests. Technical support and spare parts orders will also be handled through the support centers. A regional technical support hotline will help reduce or eliminate hold times. In addition, a range of LVD sheet metal fabrication equipment will be on display for operator training and customer demonstration.

Open learning program
10 years strong

The ‘open learning’ program celebrates its 10-year anniversary this year. Established by LVD in cooperation with other local companies, the program offers LVD employees the opportunity to advance both professionally and personally through a wide range of training programs.

Training is outlined by LVD, while the employees engage themselves to invest their time. This creates a shared responsibility which benefits both parties. With 40 to 60 LVD employees participating per semester, the program continues to be very successful.

We stand ready to serve!

To stay current and keep connected, LVD Service Managers from all over the world gathered at LVD headquarters for training sessions, machine and software demonstrations, and to share what they’ve learned and experienced.
ANDRÉNVERKEN - SWEDEN
KEEPING IT LOCAL
Based in the small Swedish town of Smålandsstenar, sheetmetal and pressworking subcontractor Andrénverken knows what works best to stay competitive and win business in a high-cost economy.

As Managing Director Johan Bredenfeldt explains, keeping it local is a good strategy.

“We only work with Swedish customers and that is deliberate. Our biggest customers have a policy that they only work with the contractors that are around them. It gives short communication chains and fast response times.”

Local is relative though, Sweden is a big country, and it is as far to Andrénverken’s customer Luleå GeneratorService as it is to Milan – and it takes two days by truck to deliver parts.

Another customer is Skeppshuts Guteri, which makes cast iron cookware just a few kilometres away. Its Production Manager Erik van Dijk puts the benefits of thinking local in a nutshell: “Long distances and different cultures can cost more than it says on the price tag.”

Andrénverken’s biggest customer though is industrial lift truck manufacturer Toyota Materials Handling. And if the volumes aren’t the same as for Toyota’s automotive business, 10,000 parts a year rather than hundreds of thousands, then the expectations and quality demands certainly are.

Says Johan Bredenfeldt: “Just in this area we have 200 competitors, the same size as we are and doing the same things as we are doing. It’s not easy. But all of us have one big customer – in our case Toyota.”
“We chose an automated system so that we don’t need to be there when the machine is cutting. We are saving hours. It is a revolution.”

“It is hard to have more than one big customer because they tell us how they want us to work – we can’t tell them. And if you have two big customers it’s going to be very complicated because they will want different things.”

He says that working the Toyota way means a focus on Kaizen – continuous improvement. Daily shop floor meetings focus on identifying ways to do things better, reducing waste and minimising costs that do not add value.

“When you are supplying a large company like Toyota, delivering kits of parts to the production line on a just-in-time basis, you can’t afford to get things wrong.

“If we fail to deliver on time they have a big problem – and we have a bigger problem. We can’t risk getting into the situation where they are missing parts for assembly.”

Mr Bredenfeldt joined Andrénverken three years ago and his mission is to double the company’s turnover.

As well as getting out into the market to win new customers, he has also instigated investment in new production systems to increase its capacity and production efficiency. These include an LVD ToolCell automated tool changing bending system with automated tool setup and CADMAN® programming software and a 4 kW LVD Electra FL 3015 fiber laser with a Compact Tower, an automated load/unload system with a 6-pallet material storage, which complement an existing Axel CO₂ laser system.

Mr Bredenfeldt says: “We bought the Electra because it is designed to cut thin metal very quickly and 95% of what we cut is thin material. With the Electra we can cut sheet up to 5 mm thick at twice the speed as we could before, so we are more competitive – and we are winning more business because of this.”

He adds: “We chose an automated system so that we don’t need to be there when the machine is cutting. We can leave it unmanned and leave it overnight, so it is very cost-efficient. We can put at least a shift’s worth of work in the tower. The driver for this is that wage costs here are high, so we want to have as few people as possible running the machines.

“It is also difficult for us to find skilled employees with the right training. Smålandstener is just a small town and the young people don’t want to stay here. They want to live in the big cities like Gothenburg.”

“CADMAN software means we are now processing work in a completely different way.”
This makes it even more important for Andrénverken to exploit technology to the full – and integrated programming using LVD’s CADMAN® software suite has made a big difference.

“The new laser made us more competitive, but it didn’t really change the way we worked,” says Mr Bredenfeldt. “But the CADMAN software means we are now processing work in a completely different way. The software automatically creates the program, tool setup and bend sequence for us from the 3D CAD model.”

Taking the technology to the next level, Andrénverken chose to combine integrated programming with the automated tool changing capability of the ToolCell.

“It was the same thinking as for the software. On small-volume series we are much more efficient and we can handle the work in a completely different way.

“In the past it took from 30 minutes to an hour to change the tooling. Now it takes maybe five minutes and you get the program directly from the database. So compared to programming on the machine and changing tools manually we are saving hours. It is a revolution.”

“When you are supplying a large company like Toyota, delivering kits of parts to the production line on a just-in-time basis, you can’t afford to get things wrong.”
NEW TUBE LASER CUTTING MACHINES

High-performance machines that efficiently handle high-production tube fabrication.

Tube laser cutting offers the advantages of accuracy, repeatability, speed and versatility over conventional tube cutting methods. The tight tolerances and high speed of tube laser cutting results in precision parts ready for secondary processing, which reduces the cost per part. LVD gives you more laser cutting options for your fabricating applications with an expanded portfolio now featuring tube lasers.

**TL 2665** and **TL 2665-FL**

The TL 2665 and TL 2665-FL tube lasers are designed for high volume tube manufacturing. They can process tube lengths up to 7925 mm and tube diameters up to 165 mm and 127 mm square. They can cut round, rectangular, square or other standard tube profiles at optimal speeds.

Configured with a 2.5 kW CO₂ resonator or 2 kW fiber laser source, TL 2665 systems offer fast, easy set up with 7-position magazine feed and automatic features like twist compensation and leading edge detection. They are engineered for ease of service and maintenance.

* for North American market only
Options such as automatic loading, automated nesting, bundle feed and programming package make these systems highly productive.

**TL 2430-FL** and **TL 2450-FL**
LVD’s TL 2430-FL and TL 2450-FL fiber laser tube cutting systems offer the best value in the market. The TL 2430-FL cuts a maximum 76 mm diameter round and 50 mm square. The TL 2450-FL handles a maximum 127 mm diameter round and 89 mm square. Both systems provide the speed and cost efficiency of fiber laser technology, offering consistent power delivery for thousands of cutting hours without the need for maintenance intervention. Extended CNC-controlled in-feed or out-feed lengths as well as an optional out-feed conveyor allow the processing of longer tubes.

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**RICK JACKSON,**
TUBE LASER PRODUCT SALES MANAGER, NORTH AMERICA

“Our unique magazine loader lets you load any size tube without a changeover.”

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**Speed + versatility = lower part cost**

LVD’s tube laser cutting machines help lower part cost by producing shapes and complex contours quickly, efficiently and with high repeatable accuracy. The precision of laser cut components can eliminate the need for additional operations or improve the accuracy of secondary processes such as welding. Learn more about LVD tube laser cutting machines, visit LVDgroup.com.
Mittaş Poles fabricates a large range of steel poles with polygonal and round sections in its 35,000 square metres manufacturing plant based just outside Ankara, Turkey. The company exports its columns to energy and electric companies, city furniture and road building companies in more than 110 countries throughout the world.

Depending on the increasing usage requirements and purposes, lighting poles are manufactured in different categories; streetlighting in residential and commercial areas, airports, harbours, sport stadiums, and many other applications. The product range can meet lengths up to 12 m in one-piece and up to 120 m total length. Mittaş Poles bends S235 to S355 steel plate with thicknesses from 3 to 20 mm.

Mittaş Poles acquired an LVD 2000T/12m tandem press brake twenty years ago that is still working perfectly today. They have recently invested in a tridem press brake for bending long polygonal sectional columns. The tridem is fully custom-made and consists of three 400/40 PPEB press brakes which represents 1200 tons of pressing force. All three machines work in synchronised unity using a single LVD TOUCH-B control.

Why invest in a tridem press brake? "Velocity", responds Kağan Tolluoğlu, Deputy General Manager. "We needed a press brake that can handle long bending lengths at dynamic processing speeds. With the tridem we produce 25 lighting poles per hour compared to 12 per hour with a tandem, the decision was easily made. The three machines gain momentum as they are smaller than the tandem machines."

“This high tech custom-made machine will deliver us high productivity for many years!”
“The strength of LVD? We think outside the box. If we think something is necessary, we do it.”

A logical choice
In 1983, when I was eight years old, my parents bought a Commodore 64. My older brother and I were completely taken with it! When I was 18, I firmly decided to take a master’s degree in computer science at the University of Leuven.

My father, who spent his entire career working as a mechanical designer at LVD, told me that there was a job opening coming up. I seized the opportunity and started as a software developer in December 2000.

Working at LVD
My first major project was to design the SQL Server database, and I’m still really proud of that, even today! It’s a very open concept: in addition to tools and bending technology, the database also contains machines, workpieces, and job lists. All CADMAN products can connect to the same database and exchange data.

What makes CADMAN® Suite unique is that now the software for bending and laser cutting is fully integrated. Our universal software must be able to control all machines, and that is precisely where the challenge lies! This is not only practical for us, but
Bart Vandromme works as a Senior Software Developer at LVD’s headquarters in Gullegem and is one of the driving forces behind the CADMAN® Suite.

also for the operators. If they can set configurations on a TOUCH-B, they will have no problems handling TOUCH-L; the user experience is the same.

My job largely consists of coming up with new concepts for CADMAN Suite as well as the further development of CADMAN-B. I have direct contact with beta customers, who test our new software. I also give internal training to sales and customer service staff whenever new software is released.

The nice thing about my job is that you have control of everything from analysis, programming, and testing on-site at the customer, to service and support.

A good team
Our dynamic software team consists of 15 people. New colleagues are usually recruited at the end of their internship. Those who prove that they can carry out a project properly usually have a good chance of staying on. I have good colleagues, we have grown as a team and know what we can expect from each other! Weekly and monthly scrum and sprint meetings ensure that we are informed about what the other team members are working on and save a lot of time. For example, we may decide to use an existing development in other applications.

An open-minded approach
What do customers want and what do they want to do with it? You learn a lot when you visit a customer’s premises to check out the possibilities.

A good example of this is a project we did for Interfocos, a manufacturer of luxury fireplaces in the Netherlands. The customer asked for a short report with a list of the lasered pieces that still had to undergo the bending process, along with the related tools, so that he could sort them for his press brakes and enter them manually. We deliberated as to how we could avoid this extra manual step. In the end, we did the programming on-site at the customer, and we set up a complete software platform for them. Now the customer can scan pieces using bar codes and they appear immediately on their screen.

Thanks to automating this process, it is now much faster and fewer errors are made. We went beyond the customer’s initial request, but the bar code scanning fits perfectly into their QRM system and can also be implemented for other customers.

The freedom to program and implement that something extra has often led to good results, such as transparency in the TOUCH-B control. That’s the strength of LVD: we think outside the box. If we think something is necessary, we do it.

Family time
In addition to having a busy job, I also have a busy family life. In a newly blended family with five children, there is always something that needs to be done. On top of that, I am also in the middle of renovating my house, room by room, and that takes up a lot of time. You can’t program something like that; it’s pure manual labor and that’s a good thing!

“Our universal software must be able to control all machines, and that is precisely where the challenge lies!”
Founded in 1887 and now in its fourth generation of family ownership, Hofmann Blechbearbeitung is proud of its values.

The benefits of this approach are not just philosophical, they are practical too. “We are situated right in the middle of ‘packaging valley’, with six big packaging equipment manufacturers within a 20 km radius. They pay good wages, so we want to make sure they don’t tempt our trained people away. That’s why it is so important to create an environment where people want to work.”

He says that, above all, the most important thing is to develop the employees of the future. “We train our own skilled workers and take on three new trainees every year – which isn’t bad for a 65-person company. We have an apprentice workshop and for every three apprentices we have an industrial foreman who looks after them and gives them targeted training. The most important thing we can do to stay competitive is to secure the next generation of skilled employees. Coupled, of course with ongoing investment in the latest production equipment so that we can stay as flexible as possible.”

One of the company’s biggest recent investments was a first, then a second ToolCell 220/40 automated tool changing bending system with CADMAN®-B programming.

The machines are designed for bending large sheet metal parts with a daylight up to 600 mm and a 400 mm stroke, for maximum bending capacity.

Says Oliver Lehrach: “We have customers with demanding requirements so we need to have a flexible production capacity to meet their needs. They are mostly focused on the manufacture of complex plant equipment, primarily for the pharmacy industry, but also for drive technology, ventilation and foodstuffs.”

Works Director Oliver Lehrach explains: “These personal values are very important to us and come from the fact that we are a family company.”
“Our real focus, and where we really have our know-how is in welding, and in particular the welding of large fabricated assemblies. These are generally one-offs or small series – anything complicated, very demanding, and big.”

“We can’t run the press brakes for several hours on the same part. That’s why we came to LVD; they could offer a machine that would give us fully automatic tool changes.”

He explains that there were three main drivers for investing in the ToolCell machines and programming software, with the first being workplace safety.

“In the past, once the operator had completed a job he had to take out all the punches and dies by hand and put the next set in – they are mostly very heavy and difficult to handle. Not only was there the danger that they might hurt their back or drop them on their feet, there was also the chance that they might trap their fingers between the tool segments as they were pushing them together. Automated tool-changing avoids all that.

“Secondly, the automatic setup saves time. While the machine is setting up the tooling, the operator can be putting the completed parts from the last job back in the store and collecting the blanks for the next job. By the time the machine has completed the tool change, he is ready to download the next program and start the next job.

“Finally, and most importantly, we have a more robust and secure production process. The operator no longer needs to intervene in the machine. He doesn’t have to input any bend allowances, doesn’t have to input the tool data – the programming software has automatically done this for him.

“The company is not a volume manufacturer and we have a lot of setups and tool changes on our machines.”

There is no longer the possibility that he will make a miscalculation or put in the wrong tool. “We continuously track our failure costs and have calculated that, since we started using the ToolCells, they have fallen by more than 30%.”

The LVD CADMAN® software integrates well with Hofmann’s other machine tools and can import and translate laser cutting and punch press programs produced as GEO files.

Lehrach concludes: “We were one of the first companies to get one of these machines, and the fact that it only took us five months to order a second shows how confident we are of this LVD machine.”
USA

**Fun Spot Trampolines**, a leading manufacturer of indoor trampoline park equipment, specializes in American Ninja Warrior style obstacle courses and Sky Zone parks – custom-designed to suit the space. The company emphasizes quality and superior manufacturing capacity – all steel and fabric fabrication is performed in-house. An LVD TL 2665-FL 2 kW fiber laser tube cutting machine efficiently cuts tubing for metal frames and components.

Brazil

Part of the Sonaca Group, **Sopecaero** specializes in manufacturing quality aluminum parts for demanding civil, military and space applications. It produces up to 40,000 parts per month and does so using the latest production equipment, including an Easy-Form® 110/30 press brake and CADMAN® programming software.

Italy

Baking perfect bread is what **Alitech** is all about. The manufacturer of industrial baking systems produces automatic bread lines, automatic proofing units, stone plate tunnel ovens, pizza lines and more – all units are specially designed to fit the needs of the customer. PPEB-8 320/51 and PPEC-5 110/30 press brakes help turn out a high-quality product.
Malaysia

MTD Industries offers design, prototyping, metal fabrication, assembly services and more. To further its goal to create value for its customers, the company installed a new Lynx 2 kW system, adding the flexibility of fiber laser cutting to its capabilities. The Lynx joins an existing PPS 165/40 press brake.

Belgium

M-design can be considered one of Europe’s leading brands of exclusive built-in gas and wood fires, sold in more than 30 countries. To meet the increasing demand of the ecological, high efficiency fires and at the same time remaining flexible to deliver on time M-design invested in a ToolCell.

Germany

Deharde Maschinenbau bends large, heavy plates to construct parts for aerospace - aircraft components and assemblies for wind tunnel models. A recently installed PPEB-H 400/61 custom-built press brake makes heavy-duty bending possible. The machine was designed with special features, including a front and rear crane track for material handling.

Australia

Australia’s most recognized trucking brands, including Volvo and Mack Trucks, use chassis and driveline components made by Galvin Engineering. Investment in a PPEB 170/30 press brake, Sirius laser cutting machine and integrated CADMAN® software helps Galvin handle up to 12 mm structural plate from drawing to finished product, achieving perfect tolerances and quick turnaround.

Denmark

As a young fab shop, Rustek a/s prides itself on being flexible – working closely with customers to meet specific requirements and having the right equipment to get the job done. Keeping the shop versatile is an Electra 3 kW fiber laser cutting machine, Axel 4 kW CO₂ laser, and an Easy-Form® press brake recently updated with LVD’s TOUCH-B control for increased functionality.
PRESS BRAKES
RAISING THE BAR!

LVD upgrades and enhances its portfolio of PPED, PPEC and Easy-Form® press brakes by including the graphical, icon-driven TOUCH-B control on all models, compatible with LVD’s CADMAN®-B bending software.

In addition to the integration of advanced technology and software, optional multiple axis backgauges and increased standard specifications for both PPED and PPEC machines result in more flexibility and productivity.

Which model is right for you?

STEVEN LUCAS, PRESS BRAKE PRODUCT MANAGER

“The demand for greater flexibility, faster set-up and ease of use of all press brakes has increased dramatically in the last 5 years.”

PPED

Practical and easy to use, PPED Series press brakes are ideal for general purpose bending applications. The PPED is very cost-effective for short or long runs, small or large parts.

Key specifications
- Capacities from 50 ton to 320 ton
- Working lengths from 2000 mm to 4000 mm
- Welded one-piece frame up to 320 ton
- 4-, 5- and 7-axis configurations, predefined and standardised
- Tooling style W/LVD/Universal/US
- 15” TOUCH-B control
**PRODUCT FOCUS**

**EASY-FORM®**

The Easy-Form® press brake owes its name to the built-in Easy-Form® Laser adaptive bending system, which adapts the ram position in real-time. This full-featured machine has the flexibility to bend a wide range of material types and thicknesses making it suitable for high-demand applications.

**Key specifications**
- Capacities from 80 ton to 640 ton
- Working lengths from 1500 m to 8000 m
- Welded one-piece frame up to 400 ton
- 5- or 8-axis configurations
- Status lighting up to 320 ton
- Tooling style W/LVD/Universal/US
- 19” TOUCH-B control
- Easy-Form® Laser system

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**PPEC**

The PPEC with its modern and ergonomic design offers unconditional accuracy and solid value. The press brake performs extremely well for the vast majority of standard applications that demand good repeatability.

**Key specifications**
- Capacities from 35 ton to 640 ton
- Working lengths from 1550 m to 6100 m
- Welded one-piece frame up to 320 ton
- 4-, 5- and 7-axis configurations
- Status lighting up to 320 ton
- Tooling style W/LVD/Universal/US
- 19” TOUCH-B control
Gabriel Deak, Quality Control Manager

Measuring up
Gabriel joined LVD five years ago as a press brake assembly technician, progressed to building laser cutting systems and, with that solid machine-building experience, moved into Quality Control. A strong mechanical aptitude, good language and metalworking skills gained from former jobs coupled with the desire to firmly establish roots and a career, made Gabriel the perfect fit for the job.

All in the details
Quality control for LVD press brakes involves a standard 60-point checklist of items, including bending accuracy tests, diagnostics, safety and software testing, which may vary depending on machine model. The list continues to grow as new features and advancements are made. According to Gabriel, a full quality check of a press brake will typically take at least two days. Key check points include the crowning table and diagnostics.

“The crowning table is responsible for good bending, so it’s a critical check. We bend the full length,” explains Gabriel. “Also important is that the press brake reaches the correct bending speed during the working and the return cycle.”

The machinery must conform to the strict parameters and guidelines set by LVD. To ensure that’s the case, Gabriel consults with his fellow colleagues and counterparts at LVD Company on a daily basis.

In addition to performing quality control checks, Gabriel also coaches and mentors fellow QC colleagues. Coaching involves instruction on proper measuring techniques, how to get the right feel of the measurement instrument, and the importance of a visual quality check.

When an issue arises, Gabriel tackles it head on in a direct manner, preferring to confront the problem and move toward a solution.

For Gabriel Deak, quality is the most important ingredient. As quality control manager at LVD S3 in Slovakia, Gabriel’s goal is to ensure LVD’s PPED, PPEC and PPEB press brakes deliver on the high standards that make LVD a bending technology leader. He believes accountability is key: “Every individual is responsible for quality.”
“I say what I think,” explains Gabriel. “And, I’m always with the assemblers, not in the office, trying to solve the problem.” Gabriel motivates his team to focus on getting every detail right. The goal is zero non-conformities. For every non-conformity report that arises, Gabriel works with his colleagues to investigate and prevent a future occurrence.

Growing responsibilities
While he never envisioned himself as a quality control manager for a sheet metalworking equipment manufacturer, Gabriel enjoys the work and the challenges of the job that come from an ever-evolving product line.

“The machine designs and software are always changing – there’s always something new,” says Gabriel. “I like that it’s never boring.”

“Every individual is responsible for quality.”

He adds: “I’m interested in what I’m doing. If you don’t like what you’re doing, then you can’t expect to do a good job.”

Along with the growing responsibilities at work, Gabriel is also navigating his new role as a father to an infant son. This, too, is a job where he gladly commits himself to. Gabriel loves to travel, but these days he prefers to spend quality time at home with his family.
NBM - ITALY
ONE STEP AHEAD

From the component to the complete assembly, NBM Tech is able to meet the needs of various industrial sectors, providing know-how and expertise in the field, on a national and global level. LVD press brakes contribute to its continued growth.

NBM Tech of Scarperia e San Piero, Florence, Italy was created as a mechanical engineering company serving customers in the textile, plastic processing, machine tools, and wood industries. In recent years, NBM Tech has become involved in science and medical sectors, as well as in the demanding packaging manufacturing market. The company of about fifty people is managed by owner Mr. Giacomo Borselli along with his father, Gianfranco, and his brother, Gianluca. In its history, NBM Tech has experienced continuous expansion, both in turnover (about 8 million euro recorded in 2015) and in manufacturing capacity (with about 8000 square metres of manufacturing space available at present). Its expanded production space is home to LVD machines, most notably a new ToolCell 135/30, an automatic tool changer press brake programmed using LVD’s CADMAN®-B software.

Explains Giacomo Borselli: “The decision to integrate the LVD press brakes into our machine fleet was dictated primarily by the need for equipment able to provide higher quality and maximum repeatability in the production of components which, despite the fact they belong to the same production batch, must be processed on multiple shifts or by different operators, with the various critical aspects this can imply.

“The first press brake we have purchased with the Easy-Form® Laser adaptive bending system, has immediately ensured our company perfect processing and repeatability.

“We decided to acquire the ToolCell to increase process automation and to manage programming straight from the technical office. This has made the process faster and safer for the machine operator by freeing him from the burden of frequent retooling, which occurs often with batch processing.”

Faster, more flexible and higher quality bending
The acquisition of the ToolCell 135/30 has been a winning strategy for NBM Tech, greatly reducing unproductive
downtime in tool changing, no matter the size or complexity of the specific application.

“The ToolCell” - emphasizes Borselli - “fully satisfies the trend that requires smaller batches, with components ever more diverse from each other and increasingly shorter delivery times.”

**Real-time angle control**

Built on a rigid frame structure to guarantee maximum precision of the process, ToolCell uses a state-of-the-art servo-controlled hydraulic system and is equipped with the patented Easy-Form® Laser adaptive bending system. Thanks to the angle monitoring and to the corrective technology, this system ensures consistent, repeatable results, from the first piece to the last. A laser measures the bend angle and corrects for any variations during the bending process so that every bend is made to the correct angle. This approach eliminates re-work or multiple trial bends to obtain the required result.

**Integration for bending**

As part of a more comprehensive package (which also takes into consideration laser processes, punching, production control, communication and management), CADMAN®-B provides a simulation environment which displays the entire bending process, including collision detection, from the beginning to the end, as well as all measurement positions and tool set-ups.

“A great advantage offered by the CADMAN-B software” - says Borselli - “is the complete compatibility not only with the new ToolCell, but also with our other three LVD press brakes. This allows us to optimise orders and work flow to meet very short response times.”

**Growing to meet new challenges**

“We consider it very important” - concludes Borselli - “to keep up with the market requirements. Achieving high performance in the technologies and advanced solutions we employ is one of our main objectives. The idea of progress and improvement lies at the root of our activity.”

“Achieving high performance in the technologies and advanced solutions we employ is one of our main objectives.”
SYNCHRO-FORM

LVD’s revolutionary new solution for XXL profile bending

As an industry leader with a proven track record in XXL bending, LVD introduces the next leap in adaptive bending technology for handling large parts.

Those familiar with XXL bending will know that it is a real challenge to maintain angular consistency and the required geometric profile, particularly when handling, positioning and bending large parts with multiple bends. Until now, accumulative error and compensating via trial and error has been the reality.

LVD’s new Synchro-Form – the next generation of adaptive bending system – offers a solution. Synchro-Form makes it easy to produce accurate bends in large workpieces. The system uses a laser scanner and synchro modules (X, R, A-axes magnets) to manipulate, position and measure each bend relaying the digital information to the TOUCH-B control, which makes adjustments to part and ram position to achieve the correct profile. Variations are not accumulated but compensated within each bend step, so even after eighteen consecutive bends, the formed profile will be perfect!
“LVD’s new Synchro-Form – the next generation of adaptive bending systems.”

Synchro-Form ensures efficient bending of large parts, eliminating manual operations, increasing productivity and throughput.

LVD’s new Synchro-Form is available on configure-to-order press brakes up to 3000 ton typically used in the crane boom, yellow goods, lighting pole, construction, transport, agricultural, offshore, oil, gas and wind power industries.
SNAPSHOT

GERMAN-MALAYSIAN INSTITUTE

TECHNOLOGY ADVANCES LEARNING
The German-Malaysian Institute (GMI), Selangor, Malaysia, is a hub for advanced skills training. The premier learning organization offers high-quality technical education, training and services in response to global industry demands.

Long-standing political, economic and cultural ties have established a number of joint bodies and institutions between the governments of Malaysia and Germany, including GMI. Germany views Malaysia as an important partner in South-East Asia, while Malaysia sees Germany as a significant technology provider, especially in technical education and vocational training. GMI is governed by a 10-member Board of Directors comprised of representatives from both governments, plus public and industrial representatives.

GMI opened its doors in 1992, offering a total of four diploma programs. Today, this internationally-competitive learning institute has 18 diploma programs and an enrollment of approximately 4,500 full-time students.

GMI’s methodology combines both theory and practice for a comprehensive, well-balanced education. The institute offers a broad-based engineering education with opportunities for specialization and self-directed learning and development. It provides full-time diploma programs, a pre-university program, skills upgrading technical courses, train-the-trainer programs, and industrial consulting. Students study on a sprawling 75-acre campus that includes high-technology facilities which promote a true industrial experience.

Investment in high-tech teaching tools, including state-of-the-art metalworking machinery, helps GMI advance learning. GMI has a complete punching, bending, laser cutting and integrated software training laboratory furnished with LVD equipment, including a Sirius 4kW CO₂ laser cutting machine with Flexible Automation (FA-L) system, a ToolCell with automated tool changer, a PPEC press brake, an MVS-TS shear, a Strippit V30-1225 turret punch press with robotic pick-sort system, and CADMAN® programming software. The machinery and software were purchased to support a new diploma program in Engineering Technology (Sheet Metal Fabrication & Product Development). Its goal: to develop technically skilled graduates to support sheet metal industries.

LVD technology allows GMI students a hands-on sheet metalworking learning experience that is as close to real-world as possible.
Staying afloat in today’s market means operating smarter—manufacturing high-quality products as efficiently as possible. U.S.-based Hayward Industries, a leading global manufacturer of both residential and commercial pool and spa equipment, as well as industrial flow control products, is at the peak of its industry because it’s doing just that, designing products for performance and long-term life, and continually reinvesting in advanced technology and processes.

In producing its in-ground heaters, Hayward utilises a lean one-piece flow process using LVD PPEC press brakes. Formed parts are fabricated from kitted subassembly components flowed direct to assembly. The press brakes are also flexible to form components for different heater models to assemble seamlessly with no changeover time.
The Phoenix fiber laser is an all-around performer that combines cost efficiency and dynamic laser cutting. It has the flexibility to expertly cut standard steels and non-ferrous materials in a range of thicknesses maintaining the same high quality. Three models are available, to handle sheet lengths of 3, 4 and 6 metres. Modular automation options further increase the productivity and throughput of the system.

Learn more about the Phoenix FL and other LVD products by visiting our website.