LVD’s Global Perspective

DISCOVERY
issue n°16

Meet LVD’s fiber laser range

Mid-West loads up on the latest technology

CADMAN in use: 2 companies testify

“Life on the road”
SYLVI O OLIVIERI - LVD CUSTOMER SERVICE
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“Today 90% of the work for making a product is punching and bending, the rest is assembly.”
Dear Readers,

Welcome to the latest issue of Discovery. In this issue we update you on our latest news, show you several new products including two fiber laser cutting machines and flexible automation for our punch presses. Of course we feature some of our customer case studies and ‘Snap-Shots’ that we hope you find stimulating.

We give the floor to two customers that have adopted LVD’s Integrated Sheet Metalworking philosophy. Hear from them how LVD’s CADMAN® software suite is helping them achieve the optimum process flow.

Finally we continue our ‘Discover the people behind the technology’ theme by introducing to you one of our front line customer service engineers, Sylvio, and one of our behind the scenes partners, KU Leuven university in Belgium.

Enjoy discovering more about LVD!

Carl Dewulf
President & Managing Director
Green footprint

LVD pays a lot of attention to handling nature with great care. Thanks to the efforts made in the last 3 years, LVD has been able to contribute in the following areas:

- Installation of more than 7000 solar panels
- Reduction of 22% of electricity consumption
- Reduction of 61% of heating oil consumption
- Reduction of 56% of residual waste
- Reduction of 28% use of water
- Increase of 80% in the use of waterbased paint

LVD urges everyone to make their contribution.

Upgraded US showroom

LVD Strippit’s demonstration and training facility in Akron, NY, USA has been substantially upgraded to offer a wider range of LVD machinery. The 4 million dollar investment offers customers the ability to see up to ten different machines in action including two punch presses, three lasers and five press brakes all complemented by LVD’s CADMAN software suite for the full Smart Factory experience.

LVD Cycling outfit

In Belgium, cycling is more than sport, it’s a passion… Our very own Lieven Ingelbrecht, one of our senior laser design engineers, designed a fantastic cycling outfit with LVD branding. The complete outfit with bib short, shirt and windcheater is manufactured by Bioracer, well-known supplier of professional cycling clothing. Originally an initiative for our Belgian factory the outfits have become popular with our cycling fanatic colleagues worldwide. Would you like to purchase a kit? Contact marketing@lvd.be or contact your local LVD subsidiary or agent.
LVD has established a new joint venture company with long-term Chinese partner Hubei Tri-Ring Metalforming Equipment Co., Ltd. (HD). **LVD CNC TECHNOLOGY (HUANGSHI) Co., Ltd.** will specialize in the manufacture, sales and service of punch presses and laser cutting systems, primarily for the Chinese market.

**NEW CHINESE JV COMPANY**

**Apprenticeship program**

The ‘apprenticeship program’ was born after a long tradition of students doing their internship at LVD. LVD deliberately opens its doors for these students in order to take an **active role in improving the quality of education** by highlighting the importance of putting the theory into practice. The internships are possible on different levels, for instance both technical profiles and future accountants are welcome. Each year, 5 to 10 students are doing their internship at LVD.

A welcome side-effect is the creation of a new way of recruitment and giving students the opportunity to start working immediately after graduation.

**New trade show branding**

EuroBlech 2014 saw the launch of LVD’s new trade show branding. Under the slogan “Discover the people behind the technology”, the new stand layout and branding reflect the true DNA of LVD. Our purpose is to allow customers to experience LVD machines and software in a relaxing and more personal environment.
OREEL

GENERATIONS OF DIVERSIFICATION & ACCELERATION

“Reliability is always important”
Friesland, one of the northernmost regions in the Netherlands, is known as a culture capital in the Netherlands and it’s easy to see why. The Frisian people pride themselves (and rightly so) on being the only region in the Netherlands to preserve their own language, Frisian, a Germanic language similar to both Dutch and English. In the world of athletics, the Frisians are world renowned speed-skaters and handball is a traditional sport. Lastly, you may have heard of the Frisian horse, a rare breed known for its rare combination of strength and elegance, although it’s the classic black and white spotted cow that also originates in the region that holds significance for LVD customer Oreel.

In the 18th century, a breed of cow was brought from Denmark to replace other breeds that had fallen victim to disease and flooding, thus the Frisian cow came to be and the Dutch dairy market soared. Transportation of the milk was typically done with wooden milk churns, but because of the inconveniences this brought, the wood was replaced with metal and in 1855 coppersmith Klaas Oreel found his market. The family-owned company exclusively worked in the dairy industry for over a century, Oreel didn’t support other industries until its fourth-generation of business. Today, Oreel supports a large variety of industries, from defence to the foodstuff industry. If the fourth generation was known for diversification it’s easy to tell what the next will be known for.

“The new space is equipped with cutting-edge equipment, which makes Oreel open for business across more industries.”
“Acceleration” affirms Sytse Oreel, present-day owner and director. It’s not necessary to ask Sytse to explain, it’s clear by taking a walk through the brand-new 3000 m² addition. The new space is equipped with cutting-edge equipment, which makes Oreel open for business across more niche industries. Among the machines is a 12 meter LVD Impuls laser. Sytse was interested in the Impuls when he heard of its unique layout LVD had developed with a past customer’s needs in mind. The largest Impuls version is extended so that raw material can be loaded on one side, and cut parts can be removed on the other, providing optimal material flow, especially important to consider with the handling of large parts. “The distinct layout is a key advantage of the Impuls. This is the biggest laser cutting machine in the northern Netherlands, if not the whole country.” Sytse is satisfied with the results of the Impuls and was pleasantly surprised by a feature integral to the Impuls, the TOUCH-L control. “It corresponds with the logical thinking of the operator, it’s very intuitive.” The Impuls is also equipped with Adaptive Laser Cutting (ALC) technology. ALC automatically optimises laser cutting performance and quality, using a continuous feedback system to monitor the thermal cutting process. ALC

“Building your reputation never ends. You’re only as good as your last shipment.”
Profile

**Company:** Oreel

**Website:** www.oreel-hallum.nl

**Since:** 1855

**Works with:** steel, stainless steel, aluminium

**Industry:** The company evolved from a manufacturer of metal milk churns to a manufacturer for a large variety of industries, from the defence to the foodstuff industry.

**Equipped with:**
- 1 Impuls laser cutting system with ALC
- 1 PPEB-H tandem pressbrake, 1 Easy-Form® Laser press brake

**Software:** CADMAN®-L, TOUCH-L, TOUCH-B control

automatically adapts various cutting parameters in ‘real-time’ and provides up to a 10% increase in productivity while maintaining optimal part quality.

Sytse has recently expanded his bending capacities with the addition of a 12m PPEB-H tandem press brake. LVD’s tandem press brakes are available in up to 3000 ton and dissimilar tonnage/lengths can be used. They are capable of operating with both machines synchronized with a single control but also independently with separate controls. Bends remain extremely precise despite the additional capacity for bend length and the tandem can even be equipped with the Easy-Form Laser® in-process angle monitoring and correction system. High accuracy on his new press brake is a must for Sytse. “Reliability is always important on a press brake but even more so when we’re planning on bending longer, thicker, more expensive material.”

These investments are important, but so is Oreel’s approach to business. “Frisians are known to be straightforward, and coincidentally, that’s how we operate Oreel.” “We’re a flat organization,” explains Sytse. “We can stay focused on our customers since we aren’t bogged down with corporate bureaucracy. No excessive meeting or paper work here, customers are always dealt with directly”. Through their rich history, always with a focus on quality, Oreel has made a name for itself but Sytse keeps aiming higher. “Building your reputation never ends. You’re only as good as your last shipment.”

What’s next? Sytse plans to continuously invest in the latest machinery as he believes it’s a core factor to continued growth. The business has changed vastly since his forefathers supported the dairy industry many years ago. Despite this growth, Oreel has always managed to stay true to the hard-working, straightforward nature of the Frisian culture.
TWO NEW FIBER LASER MODELS

“LVD has carefully balanced the technical specifications of the machine with the machine’s price point to ensure optimal cost per part.”

Over the last 6 years we have seen the rise of fiber laser cutting technology in fabricating workshops. With low running costs and high cutting speeds fiber lasers are fast becoming the laser to have. To offer her customers the greatest flexibility, productivity and cost-effectiveness, LVD has introduced two new models to the portfolio.
LVD’S FIBER LASER RANGE

Lynx FL
The Lynx is a fiber laser cutting system, ideal to enter the world of fiber lasers. Powered by a high efficiency IPG (2 kW) fiber laser source, Lynx provides dynamic, accurate processing of traditional sheet metal materials with the added versatility to efficiently process metals such as copper and brass. A compact design available in a sheet size capacity of 3000 x 1500 mm, the Lynx maximizes uptime with an integrated shuttle table system that allows one table to be loaded while the machine is cutting on the other table.

Phoenix FL
The newest machine to LVD’s fiber line-up, the Phoenix, offers the perfect balance of performance and price. Powered by an IPG fiber laser source with power options of 2, 3 and 4 kW, the Phoenix unites dynamic laser cutting with LVD’s advanced automation solutions (CT-L and FA-L) all driven by LVD’s Touch-L 19” touch screen icon driven control system. Introduced to the market with sheet size capacity of 3000 x 1500 mm (with 4000 x 2000 mm coming in 2016).

Electra FL
The Electra is designed from the ground up to be as fast as the process of fiber laser cutting allows. Capable of maintaining 2G acceleration during cutting, the Electra is the ultimate high speed laser cutting machine. Available in a sheet size capacity of 3000 x 1500 mm, powered by either a 2, 3 or 4 kW Rofin Sinar Fiber laser cutting source and controlled by TOUCH-L, the Electra can also be combined with one of LVD’s laser automation solutions:
- **Compact Tower CT-L**: a cost-effective space-saving tower storage system for automatic loading, unloading and storage of raw material and finished parts.
- **Flexible Automation FA-L**: a fast automatic load/unload system for interchanging finished and raw sheets on the shuttle table within just 40 seconds.

KURT VAN COLLIE, PRODUCT MANAGER LASERS

“With three models in our fiber laser cutting range we can offer our customers a technically and commercially balanced solution.”
STODDART

Born and bred in Queensland in 1959, Stoddart is a family owned business which is currently run by the 2nd and 3rd generation family members. The company crafts a huge range of metal products in the 22,500 m² of factory floor space in Brisbane, Australia.

Stoddart is a specialist in the supply of products for commercial kitchen applications and equipment to heat or cool food in restaurants. You can also find other Stoddart products such as bus shelters, seats, drinking fountains and benches in the streets and parks all around Australia.

“Our products range from small stainless steel commercial cooking appliances to large structural steel or aluminium structures, so the machines are used to press stainless steel, mild steel or aluminium. The thicknesses that we typically bend are 0.9mm
to 3mm. However, it is not uncommon to see 6mm – 10mm stainless steel and mild steel items being bent. Our batch sizes range from 1 to 500 units." says Darren Haidley, General Manager Engineering and Customer Service.

"The competitive advantage of LVD machines is that they are not single function machines, they are very flexible, very fast to setup and can produce a diverse range of products. The tooling that they use allows us to produce almost any product that the customer may come to talk to us about."

"Unlike in the past, today 90% of the work for making a product is punching and bending, the rest is assembly. The machines have made the assembly very quick and the accuracy of the finished product is far superior from what it used to be." continues Haidley.

Recently, when Stoddart invited an international customer to its facility, it was the ideal opportunity to remake one of their products. "With the CADMAN software we drew the product up in the office in the morning, programmed it at lunch time, punched it in the machine, folded it up in the press and assembled it that same afternoon. Thanks to the technology, we were able to make a product in 30 minutes compared to 7 hours using the methods from their factory."

Stoddart is equipped with 4 LVD turret punches and 12 press brakes, of which 7 are LVD PPEB presses. The prestigious Halton kitchen range is one of the examples completely built on LVD machines, going from drawing to roll form to turret punch to press brake to assembly and to installation.
KU Leuven University
- Leuven, Belgium
- Founded 1425
- 55,000 students
- Co-Founder of League of European Research Universities (LERU)
- Within the top 100 universities in the world
- International co-operation with over 400 universities around the world

The ‘Chair in Sheet Metalworking’
A research position in KU Leuven, sponsored by LVD, specialising in developing new sheet metalworking technologies. Part of the Production engineering, Machine design and Automation (PMA) division with links to Flanders Make – a strategic research centre for the manufacturing industry.

LVD CHAIR: UNIQUE SUCCESS STORY
Discovery meets with Prof. Dr. Ir. Joost Duflou, faculty member at the Mechanical Engineering Department of the KU Leuven, to speak with him about what the LVD Chair in Sheet Metalworking Technology means to both LVD and the Leuven University.

The beginning
The partnership between LVD and KU Leuven goes back to the 1980s. The PMA division - led by professor Hendrik Van Brussel - and LVD worked together on robotization and various mechatronic and holonic manufacturing systems.

Strengthening the relationship
In the 1990s LVD partnered with the next head of the PMA division, Jean-Pierre Kruth, recent winner of the Bower Science Award from the Franklin Institute in the US. Professor Kruth continued the focus on sheet metalworking technologies including CAD/CAM, process planning, laser processing and production engineering.

The next chapter
In 1996 Professor Joost Duflou is working in Klong Luang (Thailand) at the AIT (Asian Institute of Technology) and studies for his PhD. His chosen topic is 3D process planning for metal bending. 'I had already completed my PhD thesis by the time I came back to work in Belgium and it was then that I met Wim Serruys, LVD’s Engineering, Research & Development Director. We spoke about my thesis and it was from there that we decided to work together more intensively.' In 1999 LVD group started their sponsorship of the new chair of sheet metalworking technology at the University of Leuven, the objective being to establish a long-term relationship to stimulate innovation and help educate the innovators of the future.

What does the chair entail exactly?
Prof. Joost Duflou: "The chair is a collaboration with long-term innovation in mind. It involves the university affiliating itself with a company and selecting a research focus that is relevant. In this context, we not only handle specific short-term projects, but also research projects which may become relevant in 5 to 10 years' time." For LVD, continuity is a major trump card: "Researchers are not obliged to start from scratch each time; the many years of experience are accumulated in the chair and that yields a return."

Why is it important for the KU Leuven to collaborate with a company like LVD?
It gives our people the chance to do research into the latest technologies while at the same time being exposed to the reality of the business world. The LVD chair is very practice-oriented. For the university, it is a framework within which we carry out specific research projects.

How does the chair make a tangible contribution to LVD’s success?
If businesses are to be successful and to stay one step ahead of the competition, they must focus their efforts on innovation. The chair offers LVD the opportunity to have research projects conducted without that mandatory ‘time to market’ requirement. Sometimes it works; sometimes it doesn’t. Whether or not the research findings will go on to be developed to become a commercial product is one that LVD evaluates.

Prof. Joost Duflou: ‘Without the chair, LVD might not have achieved so much in the field of innovation, particularly software integration. A great example of a development that is unique is LVD’s CADMAN®-B software. It can be used to automatically calculate bending solutions for extremely complex part geometries without user interaction.’

What explains the success of the chair?
The demand for researchers is enormous. The chair has attracted an incredibly diverse and international PhD community. For instance, there are people from Russia, Iran, Portugal as well as Belgium working on a range of different projects for LVD. The LVD chair is extremely application-oriented, which makes it unique and gives it international recognition.
At Mid-West all three sheet metal technologies are integrated through the CADMAN® network, so LVD-Strippit experts can problem solve online without a site visit. “You could call and tell someone what the machine is doing, but when they log in using LVD Teleservice and actually see it on their screen, ‘Ah!’ They can see what’s the matter,” explains Archie Adamisin, sheet metal engineering manager. “That differentiates LVD.”

Mid-West Metal Products Loads Up On Latest LVD Technology
In the 1980s Mid-West Metal Products grew to become the US market leader in wire pet cages. Despite their automation capabilities the firm moved production overseas a decade later. The remaining wire and sheet metal equipment became the Mid-West industrial division now headed by Steve Confer.

Wire pet products produced through Mid-West Homes for Pets are still the company’s largest business at 80 percent. The remaining 20 percent comes from the industrial division’s domestic manufacturing and job shop.

“A part that used to take 45 minutes to set up now takes five.”
Mid-West Metal Products’ production floor exhibits the latest LVD-laser, press brake and punch press networked through CADMAN software.

Adamisin recalls when Dan Caprio, LVD-Strippit punching product sales manager, visited as the Mid-West team was struggling with punching an especially problematic part on the then new VX. Caprio asked, “Have you considered CADMAN?”.

“It didn’t take much convincing after a free software trial”, admits Adamisin. Perhaps the biggest efficiency gain came from integrating CADMAN-B with Mid-West’s new PPEC press brake, resulting in substantial setup reduction. “A part that used to take 45 minutes to set up now takes five.

What’s more, integrating CADMAN with the new PPEC press brake gives new life to the company’s older LVD-Strippit workhorse press brakes”, explains Adamisin. “If the PPEC is tied up, we print the setup sheet that tells you to put these punches and dies in this place in that old press and it works.” CADMAN also allows experienced press operators to make corrections on the fly. Adamisin: “If the press operator makes changes on the floor, it changes it on the database file. So, before we make an engineering change, we can see what he did.”

**Quality and speed**

Mid-West installed their latest LVD machine, a Sirius laser, in 2014. “The machine easily cuts even the most challenging plate steel”, says Adamisin. And by nesting in CADMAN for the laser and turret, the company achieves more parts per sheet than before, thereby reducing the use of materials.

Such speedy problem solving helps Mid-West focus on its own company strengths: quality and on-time delivery. “When a customer comes to us, they want it the next day or next week,” says Brad Anderson, industrial division plant manager. “And we can usually turn parts around quickly – with quality.”

Admits Confer, “A lot of our customers get their first shipment and say, ‘I can’t believe you’re already done with this.’
USA (Richmond, Illinois)
EMS Industrial & Service Company manufactures complex copper bus bar, aluminum bus bar and bus bar systems. They have been delivering quality products to their customers for over 50 years and recently expanded their machine park by installing a 4 kW Electra fiber laser.

Brazil (Caxias do Sul)
Rubizza Ltda. is an expert in production of sheet metal parts for the yellow goods market. The experience and technical solutions offered by LVD made them decide to acquire a PPEB-H 400/61-EFL press brake.

Turkey (Hoşdere)
Mercedes-Benz Türk A.Ş. manufactures buses and trucks in Turkey. The company currently has two plants: the Hoşdere production facility in Istanbul, where it produces city-buses and coaches, and the Aksaray truck facility in Central Anatolia, where it manufactures light, medium and heavy-duty trucks. Mercedes-Benz Türk Hoşdere procured five PPEB 80T press brakes this year.
China

Syney Elevator Co., Ltd. (Hangzhou), is specialized in first-class manufacturing of elevators, escalators, moving walks and conveyors. They have a full working procedure of incising, fold bending, welding, spraying, fine machining and assembling and mainly distribute to Southeast Asia, Europe and Russia. They have acquired an Electra 3 kW fiber laser cutting machine with Flexible Automation for Lasers (FA-L).

Poland

Elzab is the first company in Poland to produce electronic devices on a Strippit PX-1225 punch press. They produce and distribute a wide range of fiscal cash registers, devices and systems for Point of Sales, peripherals and accessories for sales registering and managing. Their cash registers have achieved wide acceptance in their country and abroad because of the high quality and functionality.

Italy

BR1 group is a leading company in the construction of machine tools and food-pack machines and in the processing of groups and subgroups for printing and flexographic machines, laminators and actuators. BR1 has integrated a department exclusively dedicated to sheet metalworking and invested in a PPEB-EFL 220/30 press break and an Orion 3015 Plus 2.5 kW laser cutting machine with a 6 pallet Compact Tower.

Malaysia

At GMI, the German-Malaysian Institute, a full range of LVD machines are being used to equip their lab. Students in Metal Sheet Fabrication and Product Development are given the opportunity to learn and develop their skills on a PPEC press brake, a Sirius Plus laser cutting machine with FA-L, a Toolcell, a V-Series punching machine and an MVS shear.

Belgium

Located next to LVD headquarters in Gullegem, Shapes Metalworks is a young and dynamic company which has already proven its competence in diversified and made-to-measure sheet metalworking. It further invested in a PPEB1000/8100 and an Impuls 12530 6 kW.

Australia (Brisbane)

RCR is one of Australia’s leading, multi-disciplinary engineering firms, supporting major resource, energy and infrastructure projects in Australia, New Zealand and Asia. In addition to the Sirius Plus 4 kW, the PPEC-6 50/20 and the PPEB-EFL 170/30, RCR is recently equipped with an Impuls 6020 6 kW.
LVD’s Flexible Automation for Laser cutting systems (FA-L) has been further improved with additional functionality for punching systems. FA-P offers advanced load/unload, part picking and a large area for stacking punched parts directly onto the allocated pallet!

Sheet loading
FA-P loads sheets up to 3050 x 1525 mm and material thicknesses up to 4 mm from two shuttle tables with a maximum capacity of 3000 kg.

Advanced part picking and stacking
The automation system can handle punched parts from 200 x 100 mm to large sheet sizes. Two independent gripper arms find the best position to grip the part. All vacuum suction cups mounted onto the arms are individually programmable. They are activated following the nesting configuration calculated by LVD’s offline software module CADMAN®-P utilising small, closely spaced suction cups for punched parts or bigger suction cups for larger sheets.

The suction cups pick the part from the PX after the last hit and then position the part gently on top of the other punched parts with the same size on the stacking pallet, thus forming perfect piles.

Large stacking area
A large stacking area of 8 m² provides space for 8 europallets. A unique laser distance-sensor measures the height of the pallet and the stacked parts. Following this measurement the punched parts are directed from the table to the correct pallet piece by piece. There is no operator or extra automation required to change between the pallets within the stacking zone.

Skeleton removal
After the punched parts are separated and stacked onto pallets, the remaining skeletons are moved to the other side of the machine for efficient removal, via the skeleton offloader, onto a pallet. In this way offloading time is significantly reduced.

Pick and sort with TOUCH-A control
Based on the job-list and the

Automated systems have become increasingly sophisticated and have a positive effect on productivity, reliability and accuracy. LVD launches the in-house developed Flexible Automation for Punching (FA-P) for its Strippit-PX series of punch presses.
measured stack height, TOUCH-A picks and sorts on pallets. The controller can start with partially filled pallets from previous jobs and can redo sort calculation based on the new pallet configuration. The control counts and validates the stacked parts afterwards.

**Most flexible automation yet**
With all standard features and key options available, the FA-P is LVD’s most flexible automation yet. FA-P can handle small and large volume applications with common material type, thickness and size and small as well as large work pieces.

“The punched parts are directed from the table to the correct pallet piece by piece, no operator or extra automation required.”
Sylvio Olivieri (36 yrs) has been working for LVD for nine years. Working for the ‘world’ customer service group, he is constantly on-site with customers across the world: to set up new machines, give training courses and carry out repairs. “The excitement of the job is sometimes not knowing what next week will look like.”

ON THE ROAD WITH

Sylvio

CUSTOMER SERVICE ENGINEER

The way to LVD
Sylvio studied electromechanical engineering. Before coming to LVD he worked as a technician for a telecom operator and for Brussels airport. Working at LVD was a family matter for Sylvio: his father had also worked there as a service engineer. After a period of product and software training and working under a colleague’s wings in LVD’s BeNeLux subsidiary he took off for projects around the world as a member of the World Service team.

Machines in top shape
Sylvio is specialized in assembly, installation, start-up and training of press brakes and guillotine shears. His customers can be everything from a small to a big company or a technical school with one, two or several LVD machines.
“Normally I’m away from Monday till Friday, projects for customers in the same area usually get combined. When I work in Belgium or a neighbouring country I come home for the weekend. When there is a long-term intervention far away, such as assembling and installing a large PPEB-H press brake with additional training for the customer, I can be away for several weeks.” Machines are continuously evolving towards better performances and reliability. The service team also retrofits controllers to existing press brakes enabling customers to be equipped with LVD’s latest controller, TOUCH-B, integrated with the CADMAN-B offline software. “Recently I stayed a few weeks in Saudi Arabia with 3 other service engineers for a major project, retrofitting a large tandem press brake with TOUCH-B.”

**Finding the solution**

“I get my greatest satisfaction from the variety in my job, and the contact that I have with staff members of customers’ companies. In time, you form a real bond with some of them, and sometimes you get invited into their homes. But what is also wonderful is solving a problem that doesn’t appear in any manual or in any training course. So you have to pool all your know-how to come up with a solution on the spot.”

**The right balance**

Sylvio now has a wife and a six-year-old son. Is it easy to combine his job with family life? “It’s a double-edged sword,” is his response. “On the one hand, when you’re on the way to a customer, you miss your family. But when I’m home, I miss the satisfaction of being on the road, fixing a machine and making the customer happy. It is a question of give and take. Fortunately I have good arrangements with LVD, so that we can find the right balance.”

“When I heard my father talking passionately about the machines and the countries he had visited, I thought: that’s what I want to do too. I’ve been working for LVD for nine years now, and I wouldn’t have it any other way. And my father, who has since retired, still wants to know what I’m working on,” he says with a chuckle.
INTEC MKD
KRIŽE, SLOVENIA
For Intec, investing in new equipment every five years is crucial to deliver precision sheet metal work at a competitive price and with a quick turnaround. Managing Director Milan Zupančič speaks about the company’s most recent investment.

Intec MKD in Križe, Slovenia, fabricates metal components for the European electronics industry, and can count Siemens, Rexroth Bosch and Danfoss among its customers. Typical for this market are complex components with high tolerance requirements and often short life cycles.

Smooth laser cutting
The Sirius CO₂ laser system helps Intec MKD generate prototypes quickly, in a wide variety of materials and material thicknesses without investing in tooling.

“We were using punching and bending equipment to prototype, but the cost of the tooling and the delivery time for the tooling forced us to use outside laser cutting services,” explains Milan Zupančič.

In addition to rapid prototyping, the laser has helped Intec MKD broaden its scope beyond electronics to process precision components for medical applications and to handle more challenging materials such as stainless steel in thicknesses greater than 2 mm.

The Sirius was Intec MKD’s first laser cutting system and its automated features and user-friendly operation has made the acclimation to laser cutting technology a smooth one.

“The learning curve is critical,” says Zupančič. “You need to get the technology, plug it in and use it, no nursing time. That’s the nature of our business.”

Automation lifts image
Intec MKD’s laser system features a 10 pallet Compact Tower for fully automated material loading, unloading, storage and retrieval. The compact size of the machine with material warehousing system was decisive as floor space at the facility is limited.

“In addition to rapid prototyping, the laser has helped Intec MKD broaden its scope beyond electronics to process precision components for medical applications and to handle more challenging materials such as stainless steel in thicknesses greater than 2 mm. The learning curve is critical, you need to get the technology, plug it in and use it, no nursing time. That’s the nature of our business.”

Intec MKD has also added robot assisted bending. The consistency of the laser cut parts ensures the accuracy of downstream operations such as robotic bending.

The company uses LVD’s offline CADMAN®-L programming software to create time studies of new parts which help generate project estimates. This aids in assigning...
work based on the best technology for the product.

**Consistently accurate bending**

Intec MKD first turned to LVD technology with the purchase of a PPEB press brake. Precision machinery with the ability to handle long parts in a single pass was vital.

Most of Intec MKD’s press brakes feature LVD’s patented Easy-Form® laser adaptive bending system which assures parts are produced accurately from the first piece. This technology is especially cost-effective for low volume parts.

“If you have low volumes, you cannot spend two or three attempts to set the correct angle for the prototype. We need to make the correct bend on the first attempt.”

The company’s more recent models of Easy-Form press brakes also feature LVD’s TOUCH control, an icon driven touch screen CNC control. Intec MKD’s growing pool of younger workers have quickly adapted to the intuitive nature of the control.

**Flexibility provides an “in”**

The flexibility of advanced laser cutting and bending equipment gives Intec MKD the edge it needs to compete in the European market and to broaden its business horizons.

Zupančič: “Clients are looking for us to support their business. This new equipment is more productive and it’s very important for us to have the top machinery.”

Company: Intec MKD
Website: http://www.intec.si
Since: 1974
Industry: fabrication of metal components for the electronics industry
Equipped with: 1 Sirius laser cutting system with Compact Tower and 8 PPEB and Easy-Form® Series press brakes
Software: CADMAN®-L, CADMAN®-B, TOUCH-L, TOUCH-B control

"Automation gives us consistency and better throughput from the machine."
PRODUCT FOCUS

LVD’S INTEGRATED SOFTWARE APPROACH

CADMAN IN USE

“LVD’s CADMAN software suite optimises the entire fabricating process.”

In the last Discovery we introduced some of LVD’s latest CADMAN® software solutions. In this issue we meet two companies where LVD’s CADMAN integrated ‘process flow’ philosophy was successfully implemented!

Interfocos – Holland

Interfocos designs and produces gas fireplaces and wood fires. A fireplace is more to them than an anonymous piece of metal; it’s an interior product adapted to the customer’s needs. Therefore they chose to do their sheet metalworking themselves.

Alongside the machinery plant, which comprises four Easy-Form press brakes and two Electra fiber laser cutting machines (3 kW and 4 kW), Interfocos opted to deploy CADMAN-JOB, CADMAN-B and CADMAN-L for work preparation and production monitoring. They use TOUCH-B and TOUCH-L machine controllers and LVD’s latest workflow monitoring touch tablet system TOUCH-i4 in the workplace.

Director of operations Thomas Luiten comments: “Thanks to the implementation of QRM (quick response manufacturing), a just-in-time delivery and production strategy, and to the CADMAN automation software, Interfocos can handle incoming orders faster and our delivery times have been cut by 25 per cent. In addition, intermediate stock is kept to a minimum and processing time has been significantly reduced. The time freed up by this creates more flexibility for post-production and urgent orders, which in turn means that delays are few and far between”.

Schönau – Germany

Schönau Maschinenfabrik GmbH is a manufacturer of conveyor systems and goods lifts. Personal safety and equipment reliability are the highest priorities.

Recently the company decided to start its own sheet metalworking department and make the metal parts of its own projects. For this, they purchased an Easy-Form 135/30 press brake with TOUCH-B controller and an Orion 3015 Plus laser cutting machine equipped with LVD’s TOUCH-L control system.

“Being able to manage our own process flow and to not depend on external companies, is why we implemented CADMAN,” says Managing Director Martin Schönau. “We start from a customer’s demand for a specific project which we design and turn into work orders. Together with the complete part list we import those into CADMAN-JOB. The parts are processed in batch within CADMAN-B and this checks the feasibility, creates unfolded parts for laser cutting and prepares the bending sequence and the tool configurations for the press brake. CADMAN-L nests all project components and calculates the optimum cutting path. CADMAN gives us the flexibility to decide which bending and laser jobs have priority considering the project delivery times and also to intervene quickly in the sequence of the jobs if necessary!”.
LVD ‘INTEGRATED’ PACKAGE PROVIDES IN-HOUSE FLEXIBILITY

“Now, if we need a part within 24 hours, we can make it today and by tomorrow morning it will be in assembly.”
Founded in 1969, the German company Meurer Verpackungssysteme is a market-leading manufacturer of final packaging systems for the food and non-food sectors. It supplies complete packaging lines, tailored to a customer’s requirements, including film and case packaging machines, storage systems, transport systems and palletising equipment.

As Managing Director Walter Schmidt explains: “The most important things for our customers are quality, service – with fast response times – and our ability to provide a system that meets their specific needs.

These days the emphasis is on complete integrated lines rather than individual machines, and this is one of Meurer’s strengths. “We don’t sell them a machine, we provide a solution,” says Schmidt.

Several factors led to the decision to source the machines from LVD, with the key ones being the effectiveness of the Easy-Form® laser adaptive bending system.

Ingo aus dem Moore, head of production at Meurer’s Freren plant near Osnabruck, explains: “We saw a lot of other manufacturers’ machines and didn’t see a single one with the angle measurement system working correctly. LVD promised a lot with its system, and it delivered – without any issues.”

The other key factor for Meurer has been the move to offline programming in 3D with LVD’s CADMAN software.

Schmidt: “Machine availability on the press brake has increased because we can now program offline – nearly 100% is now programmed offline – which we couldn’t do before. The operator just has to download the program. It has improved the repeatability of parts too.”

Meurer invested in a 4 kW Sirius 3015 Plus laser, an Easy-Form 320 ton 4.5 m press brake and CADMAN® software.

The new equipment has increased productivity, given it more control over the manufacturing process and allowed it to explore new design possibilities.

The design team has taken full advantage of this new opportunity, changing designs to combine components and reduce the amount of welding required.

“‘We used to use a lot of tubular profiles in the structure of the machines, but now we can use profiles produced on the press brake. In the food industry they don’t want to use closed sections such as tubes because of hygiene requirements – you can’t see what is inside the tube. The latest generation of machines use open profiles formed from sheet.’

Meurer’s strategy is to produce as much as possible in-house and the flexibility, productivity and design possibilities of the LVD machines support this.

“We are quite unusual in doing it all in-house, but we think it is a very good way of doing things. It gives us fast response times that many others can’t match any more.

When we were using an outside supplier we had a lead time of around 8 to 10 days. Now, if we need a part within 24 hours – which is by no means unusual – we can make it today and by tomorrow morning it will be in assembly. The LVD machines give us that flexibility.”
For agriculturists it is important these days to have their own storage space modernly equipped with focus on lower drying costs, reduction of noise levels and optimal use of energy.

Our customer Feerum, located in Poland, offers strong and durable grain processing methods from transport from the field to preliminary cleaning, drying, final cleaning and storage of cereals, legumes and oilseeds, corn, and others.

All the machines, plants and systems, such as grain dryers, silos, conveyors and elevators, are manufactured by Feerum on the latest machinery. On the picture you see their robust silos made on LVD machines.
For over thirty years, LVD’s CADMAN® offline software has maximized machine capabilities by integrating shop floor operations with the offline production world for sheet metal laser cutting, punching and bending. Today, the latest database-driven CADMAN software suite looks at the big picture and streamlines the complete fabricating process, taking even production control, communication and management into account. CADMAN provides users with live information to make informed choices, enabling improved programming and production in the workshop.