LVD

LVD's Global Perspective

DISCOVERY

ISSUE NUMBER 12

Co-manufactured Solutions

THE BEST OF BOTH WORLDS

Pullmax Series: A more comprehensive punch press range

Improving the user experience

Belgium's WAAK meets its mission

Setup time slashed by 70% for UK's Electrium

Commitment to the Asian market

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Keep in tune with the latest products and advancements designed to help you reap higher yields, streamline efficiency, and reduce setup and scrap. Sign up for our monthly e-newsletter at lvdgroup.com.

Let us know what you think of this issue of Discovery. Share your thoughts at marketing@strippit.com

Strippit, Inc.
12975 Clarence Center Road
Akron, NY
Phone: 716-542-4511
Toll-free: 800-828-1527
Fax: 716-542-5957

LVD Company n.v.
Nijverheidslaan 2, B-8560
GULLEGEM, BELGIUM
Tel: + 32 56 43 05 11
Fax: + 32 56 43 25 00


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From the EDITOR

Take it to the Next Level

This issue of *Discovery* centers on our mission to add greater value to the products we build so you can reap the benefits of equipment that is designed to do more.

Our Pullmax products provide the perfect example. LVD Pullmax punch presses punch, form, mark, bend and tap all in one machine. That means fewer secondary operations, less part handling, a lowered per part production cost.

Our automation options are broader than ever before, from an extended tool magazine to house an additional 40 tools (with a tooling capacity of up to 200) to bin sorting units, tower systems and material handling equipment. It's technology that brings you 360 degree all-tool rotation, 2.95″ (75 mm) forming capability and 24/7 operation. It doesn't get more flexible than that.

We're also focused on integrating sheet metalworking machinery with offline software and man-machine interfaces as key to optimizing the fabrication process. Our CADMAN® software serves as a single tool to share sheet metal design and programming data from production requirements and design parameters to machine operations and inventory. We've built on that capability with the introduction of our new software management tool, CADMAN®-OEE. We've also been busy improving the ease of interaction with our machines. Touch-L, an icon-driven touch-screen control interface, is one of our solutions. Read more about these tools on the pages that follow.

In our last issue we reminded you of the importance to balance the P's – price, performance, profit. We continue on that theme with technology that helps you take the step up to a higher level of efficiency and a better place of balance.

Let us take you to the next level.

Matthew Fowles
Group Marketing Manager

"Technology that helps you take the step up to a higher level of efficiency and a better place of balance."

New Product
FOCUS

PULLMAX SERIES

Extending LVD's Punch Press Product Range

The Pullmax Series now forms part of the LVD punch press product range, providing cost-effective punching, forming, marking, bending and tapping in a single machine. LVD's punch press product family now offers more choices and the greatest range of flexibility of any punch press manufacturer.

An extremely efficient hydraulic punching unit combined with table accelerations and speeds that match high hit rates make punching and forming operations highly productive and lower the cost of per part production for prototypes, short or long run operations. Punch sheets up to 60″ x 120″ (1500 x 3000 mm) without reposition in 0.135″ (8 mm) material.

The Pullmax Series includes standalone machines and automated systems. Pullmax 520, 530, 720 and 730 punch presses offer an array of capabilities to maximize the value added to components during the punching process.

75mm 360° 24/7

Forming/Bending

Exceptional forming capacity allows flanges up to 2.95″ (75 mm) to be formed in a variety of angles. Knockouts, louvers and countersinks are accurately produced, and internal as well as external bends can be achieved. Even parts not located at 0 or 90 degrees on the sheet can be formed using the OptiBend feature.

All-Tool Rotation

The Pullmax tool changer design features all-tool rotation; each tool rotates a full 360° for complete versatility. All 20 tool stations are designed to hold any size tool, up to a maximum tool diameter of 3.5″ (88,9 mm). Any tool can be used anywhere on the sheet, even close to the perimeter. Add indexable Multi-Tools for even greater versatility.

More Automation Choices

Automated handling transforms the Pullmax machine into a fully automatic system to allow unmanned production 24 hours a day, 7 days a week. Pullmax 520, 530, 720 and 730 models can be equipped with a variety of options, including load/unload, parts picking and parts sorting. A standard 19.7″ x 20.7″ (505 x 525 mm) parts chute efficiently offloads small parts. The Compact Automation system handles raw materials, loading, part picking and skeleton removal for punched and formed parts up to 60″ x 120″ (1500 x 3000 mm).

Value-adding Options

A number of options add greater versatility and value:

- Indexable Multi-Tool, 5 or 10 station configuration, increases turret capacity
- Extended Tool Magazine, available on the Pullmax 720 and 730, provides an additional 40 tool stations to minimize tool changeover and set-up
- Dual import carts for expanded material capacity
- OptiTap tapping unit is fully automatic and offered as a single unit with one spindle or multi-unit with six spindles
- OptiMark, an all-in-one part marking tool, eliminates secondary marking operations

A Punch Press to Suit Your Application

LVD offers the widest range of punch press products available, including Strippit engineered turret punch presses and Pullmax tool changer style machines.

STRIPPIT P-SERIES:

Reliable and cost-effective punch presses ideal for a range of basic punching operations in workpiece sizes up to 49″ x 98″ (1250 x 2500 mm).

STRIPPIT M-SERIES:

Large 47-station turret capacity for greater versatility and reduced tool changeover and set up times.

STRIPPIT V, VX-SERIES:

Fast and full featured turret punch presses for high demand punching applications.

PULLMAX SERIES:

Punch, form, mark, bend and tap for complete workpiece processing on a single machine, including the processing of complex, three-dimensional parts.

New Product
FOCUS

TOUCH™-L

Touch Screen Graphical User Interface

Touch™-L, a touch screen graphical user interface featured on select models of LVD laser cutting systems, brings the ease of LVD's Intelli-Touch user interface technology to laser processing so that both routine and complex operations can be quickly and efficiently accomplished with minimal operator input.

Touch-L simplifies the laser cutting process by using intuitive graphical icons and visual indicators to display and control functions such as lens and nozzle selection, download of an NC file to the machine memory, quick file searching and file editing, preview of the part/nesting, and to provide real time reproduction of the cutting path.

After selection of the parts, Touch-L performs automatic nesting and job generation and production can begin. In an easy and intuitive way, the operator can change cutting qualities, the position and type of lead-in, and add or relocate micro joints for all online generated jobs.

Touch-L supports multiple extensions, including DXF, DWG and NC, and supports USB memory and network drives.

Touch-L is also compatible with CADMAN-OEE process management software, which captures and analyzes key machine performance indicators so that users can optimize the overall efficiency of their equipment.

CADMAN®-OEE

Analyze & Optimize Equipment Productivity

Now there's a software tool to help you measure effectiveness and identify areas of improvement in your punching, bending and laser cutting operations.

CADMAN-OEE helps improve the Overall Equipment Effectiveness (OEE) of fabrication equipment by capturing and analyzing key performance indicators to help increase equipment uptime and throughput.

Overall Equipment Effectiveness (OEE) is a world standard productivity and effectiveness measure. LVD has added an OEE process management module to the CADMAN® software system to fully integrate fabrication operations.

CADMAN® OEE

CADMAN-OEE graphically depicts the effectiveness of machinery by gathering productivity data via a PC network operating between the machine and the CADMAN-OEE server. This process management tool gathers information on all three aspects of OEE: machine availability, performance and quality. It operates seamlessly in the background, gathering data without interrupting operations or requiring operator input.

CADMAN-OEE then generates graphical pie charts, Pareto analysis and other graphical data representation charts to present real-time effectiveness data. With this information, you can identify and analyze areas for overall effectiveness improvement, including areas of down time, speed and quality loss.

To learn more about how to analyze and maximize your equipment effectiveness, contact marketing@strippit.com.

Network Integrated Fabrication

Network Integrated Fabrication is the sharing of sheet metal design and programming data from production requirements and design parameters to machine operations and inventory.

LVD's philosophy is centered on integration. By seamlessly integrating state-of-the-art fabrication machinery with offline programming processes, throughput is maximized and work flow is streamlined.

THE CADMAN® FAMILY OF PRODUCTS INCLUDES:

Offline CAM programming software:

- Punching: CADMAN-P 3D
- Bending: CADMAN-B 3D
- Laser cutting: CADMAN-L 3D

Offline management tools:

- Performance: CADMAN-OEE

WHAT USERS ARE SAYING:

"CADMAN®-B 3D has changed how we work. We use CADMAN to generate every part we produce. As a result, we have increased our efficiency and our profitability."

Mr. K. Verschoor, CEO
VMT, The Netherlands

"CADMAN-B 3D and CADMAN-L 3D software is incredibly easy to use and helps us go from design to finished part faster. Used in conjunction with our newly installed OEE software management tool, it is an unbeatable combination. It's software that has truly optimized our fabrication."

Toby Schrock, Plant Manager
IPAC, Inc., USA

Application SPOTLIGHT

Automation lifts WAAK's mission

"Our goal is to provide long-lasting employment to people with disabilities based on our conviction that work is the most effective form of social integration."

Diderik Delabie, Plant Manager

An LVD Sirius laser cutting system tied to a 10-pallet compact tower is giving WAAK of Kuurne, Belgium, the lift it needs to keep a competitive subcontracting business yet meet its mission as a sheltered workshop.

At its 80,000 m^2 production facility, WAAK manufactures and assembles mechanical and electromechanical parts, semi-manufactured products and end products as diverse as kitchen exhaust fans, deep fat fryers and waffle irons, subassemblies for HVAC, and table tops for table tennis games.

The company's metalworks facility is equipped with CNC punching and bending equipment, drilling, tapping, cutting machinery and deep drawing presses. Flat sheets, tubes and profiles are processed in mild steel and stainless. WAAK is a zero-fault tolerance facility that is ISO 9001 and TS16949 certified. It also bears the West Flemish Environmental Charter for environmental care.

WAAK faces the same production issues of any subcontracting firm but it's the company's employees who confront special challenges. WAAK is the largest sheltered workshop in Flanders; 1300 of its 1700 employees are physically or mentally disabled.

Plant Manager Diderik Delabie explains WAAK's mission, which has been the core of its operating philosophy since 1965:

"As a sheltered workshop, we focus on work largely made up of manual tasks carried out with modern production resources and adapted to the capabilities and limitations of our employees with disabilities. Our goal is to provide long-lasting employment to people with disabilities based on our conviction that work is the most effective form of social integration."

Balancing the need to offer its employees enriching jobs that suit individual skill levels with the requirement to be competitive and deliver quality goods led WAAK to invest in its first CO_2 laser cutting system and to marry the machine to an automated storage and material warehousing tower.

WAAK's LVD Sirius Plus is a compact, gantry-style laser cutting machine linked with a tower unit capable of loading, unloading, and storage of raw material and finished parts.

The equipment lends a new level of flexibility for the company while opening doors to new opportunities and more work for its employees.

WAAK manufactures and assembles mechanical and electromechanical parts, semi-manufactured products and end products as diverse as kitchen exhaust fans, deep fat fryers and waffle irons, subassemblies for HVAC, and table tops for table tennis games.

Application SPOTLIGHT

As Delabie states: “Our customers ask of us what they ask of our competitors. It’s a fine balance between adhering to the guiding principles of the company and addressing the commercial reality of a subcontracting business where the customer is always right and a quality product needs to be delivered on time. Our added value consists of satisfying the high requirements of the market and offering solutions using persons with fewer abilities.”

He adds: “We have a wide diversity of capabilities; it’s one of our strategies. To have that flexibility, we have to adapt and change to the market and it takes the right machines to do that.”

More capacity, more opportunity

With smaller batch quantities the norm, more stringent quality requirements and shorter delivery time frames, Delabie and his team realized WAAK needed additional production capacity.

Says Delabie: “We would try to do as much work on our punch press as possible, but the costs were high. Laser technology offered the greatest degree of flexibility, could help us eliminate secondary finishing work, and would allow us to handle an even broader range of work.”

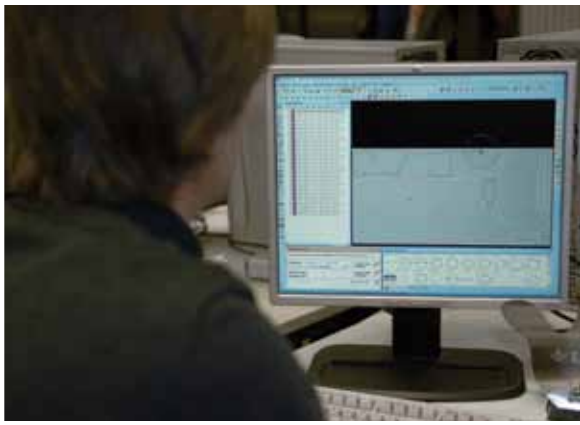
Most attractive to Delabie was the opportunities that laser technology and automation could bring to WAAK.

“Essentially we made the investment to attract more work for our people, which is our foremost objective.”

Delabie and his team chose the LVD Sirius because, based on their justification process, it provided the best level of technology and reliability.

“We analyzed the machine, processing time, cost of processing, quality of the cut, machine reliability. To be sure, we ran a lot of tests. We paid extra attention to quality. We found the LVD technology had the advantage.”

The Sirius Plus system is designed to provide consistently high quality processing results. An extensive database of cutting technology allows for processing a wide range of materials. Enhanced features such as NC Focus and Process Control automatically optimize part cut quality and eliminate the need for operator intervention.



Towering advantages

The decision to add automation via an integrated tower system, though seemingly opposed to WAAK's mission of creating jobs for its employees, was key to growing its capacity.

The compact tower frees WAAK's operators from lifting sheet materials (they can lift no more than 22 pounds [10 kilograms]). The tower system handles sheets as large as 60″ x 120″ (1500 x 3000 mm) and material thicknesses up to 0.750″ (20 mm) with a maximum load/unload pallet storage capacity of 6613 lbs. (300 kg).

It is a fully automated unit able to process a high volume of dissimilar parts. The tower uses minimal floor space, is easily accessible, and provides the ultimate cell environment for continuous work flow.

For WAAK, the laser system combined with the tower automation eliminates the need for shift work. One person is able to operate the machine on a single shift, producing parts for down stream operations and assembly.

As a sheltered workshop, WAAK can supply very sizeable and time-intensive orders in the very short term, but there are obstacles. Varying materials and small batch sizes present unique challenges.

Says Delabie: "We work best with higher batch sizes because there's a learning curve with each new job and we need our people working on a task for at least half a day."

With the laser, WAAK is efficiently handling smaller batches of 100 to 200 parts in different material types.

Adds Delabie: "We can nest faster and more efficiently for better material utilization, which help us with batch sizes."

Machine features such as a touch screen user interface simplify operation of the laser and tower. This is particularly critical for WAAK, as production equipment must be easy to learn and easy to use.

What's more the laser cutting machine has allowed WAAK to create special 'jigs' for the assembly of the parts downstream, making it easier for staff to assemble parts correctly, thus eliminating assembly errors.

Quick payback

The end result is that Delabie and his team expect a quick return on investment.

"Two to three supplementary jobs will give us a good payback for the system. We have already attracted additional work, including a new job to produce parts for domestic trailers, and we have only recently started promoting our laser capabilities to our customers."

The combination of laser technology and automation has lifted WAAK's production capabilities to a higher level and is expected to bring even more gainful work to its employees.

As Delabie sums it up: "We're confident we made the right choice with LVD."

"Laser technology offered the greatest degree of flexibility, could help us eliminate secondary finishing work, and would allow us to handle an even broader range of work."

Diderik Delabie, Plant Manager

Application SPOTLIGHT

High-speed punch press with Compact Tower expands capabilities for Abacus

Technology investment racks up solid growth

For the past five years, P.T. Abacus Kencana Industries, one of the largest sheet metal subcontractors in Indonesia, has aggressively grown its business at an annual rate of 30%. Investment in LVD technology has fueled the company's vision to be the most capable and competitive in its field. Abacus has more than 19 LVD punching, bending and laser cutting machines installed at its 12,000 square meter manufacturing space in West Java.

Its most recent purchase is a high-speed Strippit CNC turret punch press with 10-pallet compact material storage and retrieval tower. The Strippit VX-1225 punch press and CT-P allow Abacus to automate punching operations for more continuous processing.

Abacus produces industrial racks for server and data center applications and has done so since 1997. Racks are 19″ in mild steel ranging in thickness from 0.027″ to 0.472″ (0.7 to 12 mm). It manufactures both standard products and custom solutions, and has expanded its line to IT, TELCO, power/electrical products with plans for additional product offerings.

Improving the speed of processing and generating high quality parts at higher volumes in smaller batch sizes and with less operator intervention is key to diversifying its product range.

The company invested in its first automated machinery (an LVD Omega flexible fabricating system) in 1998, at the height of the Asian financial crisis. It was a calculated risk, says the chairman of P.T. Abacus, Dr.-Ing T. Soetadji, but one that marks the company's strategy to invest in technology for growth.

"It was a big move while the competitors were sleeping," says Dr. Soetadji. "Instead of slowing down, we expanded. We wanted to increase production, improve our quality and capacity to produce a greater range of products."

High speed for high productivity

Thirteen years later, and through another economic downturn, the company's business strategy remains strong, and automation is more important than ever to Abacus' growth.

"We have been forced to offer a customized product solution with many small batches," says Dr. Soetadji. "Fast product development has become a necessity."

Abacus viewed the investment in the Strippit VX punch press with compact tower as essential. Punching speed, auto indexing of tooling and Multi-Tool, coupled with high accuracy and reliability were primary considerations.

"The necessity for this type of machinery is to have flexibility but also productivity," says Dr. Soetadji. "Our customers want the product yesterday. We have to respond to that immediate need."

Dr. Soetadji initially searched for a 30-ton punch press but later refined his requirements to a high-speed 20-ton machine.

"After careful study we realized we didn't need 30 tons, so we changed our search to a 20-ton machine with higher punching speed for high productivity in thin sheet processing."

"The necessity for this type of machinery is to have flexibility but also productivity."

Dr.-Ing T. Soetadji, Chairman

Application SPOTLIGHT

The Strippit VX-1225 is the most productive punch press ever engineered by Strippit. A high-speed hydraulic ram and large 48-station double track turret combined with innovative table design and other features make the machine 30% more productive than previous generation Strippit punch presses.

Abacus benefits from the speed and accuracy of the machine, punching up to 530 hits per minute on 1″ (25 mm) centers.

The versatile mix of turret stations features four standard 3.5″ (88,9 mm) auto indexable stations that Abacus uses to expand turret capacity with indexable Multi-Tools. Every station accepts shaped punches and dies, adding to the turret's versatility and minimizing the time it takes operators to load or change tooling.

Reports Dr. Soetadji: "Using the turret punch we have the ability to change the model of the product quite often, since we don't have any burden with the tooling cost. Time to market can be reduced significantly; a new product can be introduced easily because the equipment gives us a high level of flexibility."

The energy-efficient design of the Strippit VX—one of the world's lowest energy consuming punch presses—translates to lower operating costs. The punch press has an average power consumption of only 6.7 kW with a standby of only 0.9 kW.

Compact material storage

Abacus processes an average of 250 tons of sheet metal each month, so organized storage and retrieval of material is vital. The compact tower provided the efficiency of automation to load and unload material and parts and offered compact storage for material and finished parts.

The compact tower handles workpieces up to 98.4″ x 48.2″ (2500 x 1225 mm) and sheet weight up to 198 lbs. (90 kg) with a maximum load/unload pallet storage capacity of 5511 lbs. (2500 kg). Abacus can operate the punch press and tower in a lights out environment.

For Dr. Soetadji the biggest advantage of automation is that it reduces operator involvement.

"We try our best to depend less on the operator," say Dr. Soetadji. "It's about reducing the likelihood of human error and increasing accuracy. With our first piece of automation, we realized what a victory it was to our production."

Dr. Soetadji uses the Strippit VX and CT-P for longer running jobs and is currently working to profile a list of parts best suited for the system in order to maximize its throughput.

A multi-bin storage unit for different types of materials has helped further improve productivity. The high speed of punching operations, accuracy of punched parts and the streamlined process of material handling and storage has reduced the number of steps to produce a finished product.

“Time to market can be reduced significantly; a new product can be introduced easily because the equipment gives us a high level of flexibility.”

Dr.-Ing T. Soetadji, Chairman

LVD’s touch screen user interface featured on the compact tower makes operating the system simple and intuitive, allowing Abacus to cross-train a number of its workers. Of its 330 employees, 60 are trained to use the equipment.

Shared vision

The investment in the high-speed punch press and automated tower system was a decision Abacus made with LVD as its partner. Years of strong support from LVD’s local subsidiary in Indonesia left Dr. Soetadji no doubt when it came to the choice of equipment supplier.

“Our relationship with LVD is very good,” says Dr. Soetadji. “LVD is a trusted partner that we can rely on for technology, information, business direction for the long term. That’s key.”

As Abacus continues to grow and expand its product offerings, investment in flexible fabrication machinery will help rack up continued success.

Explains Dr. Soetadji: “We want to deploy high tech machinery. Technology has made us more creative. We will continue to make the investments and take calculated business risks with the vision of keeping us competitive.”

Value Proposition

A heavy duty bending solution that satisfies budget and application

KOMATSU

"If it wasn't for this solution, we would not have been able to afford an LVD high tonnage press brake and would have had to consider a lesser known manufacturer."

Mr. Akio Takeda, President

LVD's co-manufactured heavy duty series of press brakes answer the need for affordable yet capable equipment for simple to complex heavy bending applications. Co-manufactured machines deliver LVD's renowned bending technology, advanced features and a rugged, proven bending system from a brand trusted for its forming expertise.

Co-manufactured solutions

LVD and its joint venture company LVD-HD partner to build machines that balance price with functionality. By offering a flexible approach to the configuration of the machine and using resources from LVD in Belgium and LVD-HD in China, the result is a heavy duty machine designed to custom suit both technical and budget needs.

Carrying the brand name of LVD, co-manufactured press brakes maintain a strong residual value over time.

Bending big buckets

As PT Komatsu Patria Attachment has discovered, the co-manufactured heavy duty press brake offers a solution that satisfies both application and budget.

PT Komatsu Patria Attachment (KPA), a joint venture company of Komatsu Indonesia, designs, manufactures and sells large buckets and blades for Komatsu excavators, loaders and bulldozers used primarily for mining applications. Products are built for local and export markets and are licensed by Komatsu. KPA uses a co-manufactured 1000 ton 5,25 meter press brake to produce the buckets.

As company President Mr. Akio Takeda explains, a co-manufactured machine was ideal for KPA's requirements.

"If it wasn't for this solution, we would not have been able to afford an LVD high tonnage press brake and would have had to consider a lesser known manufacturer."

Prior to purchasing the high tonnage machine, KPA outsourced components. In an effort to expand its production capabilities and its business, Takeda considered rolling equipment, but decided that bending or "bumping" provided more flexibility and would produce the tighter radiuses needed for the buckets.

The excavator buckets KPA manufactures are massive—ranging from 6 tons up to 35 tons in weight. Buckets are produced in batch quantities of 25 maximum, using material grades of 50 to 120 kg/mm^2 tensile strength in 0.354″- 1.417″ (9-36 mm) thickness. To handle such a large bending job, the press brake had to be robust.

Says Takeda: "We have several components that require a bending capacity of 500 tons or more. In our local area, it's very difficult to find a machine of that size and capability."

He adds: "We wanted a machine with high repeatability that could help us produce the components faster."

Realizing a wholly European manufactured heavy tonnage press brake was outside of KPA's budget, Takeda turned to LVD Indonesia for a possible solution.

Quality and reliability first

The co-manufactured LVD press brake provided the high reliability, quality and price that were Takeda's primary considerations.

"We bought the LVD because we believe in quality and reliability," says Takeda. "The components used are quality components, the assembly is high quality, and the press brake is high precision, producing extremely accurate bending results."

Before purchasing the machine, KPA preformed stringent bending trials. It wasn't enough for the press brake to handle KPA's high tonnage requirements; it also had to improve the efficiency of its production.

"Our orientation is focused on the customer," says Takeda. "Price and speed of delivery are important factors to our customers and so are important factors for us."

The co-manufactured 1000 ton press brake has helped KPA increase its production volumes. The company currently produces 150 tons of buckets each month and by the close of 2011 anticipates that number will be closer to 300 tons.

"We can process bucket skins very quickly and accurately," reports Takeda. "Tooling changeover is also fast as the punches and v-dies are easy to assemble and disassemble."

Two workers are trained to operate the machine and have found LVD's bending technology, particularly the press brake's control and programming system, easy to learn and use. Takeda reports he's pleased with the service and support he's received from LVD's local Indonesia office.

"For KPA, the co-manufactured press brake was the right investment," says Takeda. "We have high confidence in the machine, its durability and reliability, and in the LVD brand."

To find out more about LVD heavy duty series co-manufactured machines, contact LVD at marketing@strippit.com.

WHAT USERS ARE SAYING...

Rohas

"For our application the machine is perfect. In our business the direct part cost is critical, sometimes buying a lesser known brand in the long run turns out to be more expensive. The LVD bends very well and with the reputation of LVD we know that the machine will last. Overall our investment in LVD represents excellent value for the money."

Rohas-Euco industries Berhad
Mr. Ho Chee Seng
Senior Manager, Manufacturing Division

Leblanc

"Even though our application is quite simple, having the reassurance that we have an LVD machine bending our parts gives us confidence in sustainable quality and reliability."

LeBlanc Communications (M) Sdn Bhd
Mr. Syed Fozail Ahmad
Factory Manager

RECENT Installations

LVD equipment is installed in manufacturing facilities across the globe, including some of the best-known manufacturing companies in the world.

Rigby Jones addresses the needs of the earthmoving industry with a large-format Impuls laser cutting system.

China's Tianjin Electric Locomotive Co., Ltd. bends components for a variety of locomotive products, including golf cars.

A.L. INOX manufactures stainless steel kitchen systems.

Australia

Rigby Jones, Sydney, has added a 12 m Impuls laser cutting system to its range of metal processing equipment. A sheet metal processing company, Rigby Jones works with large format materials and added the Impuls machine to improve cutting speed and cut quality, and lower the cost of manufacturing a variety of components produced mostly for the rail and earthmoving industries. The company was established in 1960 and in 2000 joined the Southern Steel Group, the largest privately owned steel distributor in Australia.

China

Tianjin Electric Locomotive Co., Ltd., Tianjin, has purchased three LVD press brakes: PPEB-H 1600/9100-7050, PPEB-EFL 110/30 and a PPEB-EFL 400/6100-5050, as well as two MVS shears. The company is a leading, state-owned manufacturer of locomotive products, including electric cars, buses, utility vehicles, sightseeing vehicles, golf cars and more.

France

Somade Montage, Carnin, has installed a Strippit P-1225 turret punch press and an Easy-Form® press brake to expand its precision punching and forming capabilities in the manufacture of frames, railing and gates in mild steel, stainless steel and aluminum.

Germany

HMT Hebing Maschinen-Technik GmbH has installed a PPEB-H 1000/81 press brake at its production facility in Rhede. The company develops and manufactures custom made heavy duty flue gas dampers, which are used worldwide. HMT dampers are at work in power stations, gas turbine plants, cement works, waste incineration plants and other industrial installations.

India

Rans Technocrats (India) PVT. Ltd., New Delhi, has installed a Strippit S-1225 turret punch press at its newest production facility in Manesar. Rans Technocrats produces a range of commercial kitchen equipment for leading international foodservice companies. Products include custom kitchens, catering, bakery, and food service items.

Italy

A.L. INOX, Treviso, has installed two PPEB-8 220/40 press brakes each featuring a special hemming table for the production of its stainless steel kitchen systems. A.L. INOX manufactures a range of high quality foodservice equipment in standard and custom configurations for professional use and has done so since 1992.

United Arab Emirates

Pierlite Middle East, Sharjah, has installed a PPEC-5 135/30 press brake and a Strippit P-1225 punch press. A leading manufacturer of electrical lighting systems, Pierlite designs, manufactures and distributes architectural, industrial, and commercial lighting systems.

UK

Seeco (UK) Ltd., Bedfordshire, a precision sheet metal engineering firm, has invested in an LVD EFL press brake for its bending operations.

U.S.A.

Lake Air Metals, Minneapolis, Minnesota, has added a Strippit VT30-1525 turret punch press with Strippit PA-1250 load/unload system to further expand its fabrication capabilities and complement existing LVD equipment. The company produces precision sheet metal fabrication components for a number of industries, including electronics, aerospace, communications and medical.

Pierlite® is a leader in the design and manufacture of a broad range of lighting systems for the domestic, industrial, commercial and architectural market sectors.

70 PERCENT REDUCTION

"We got a 70% reduction in setup times, and I was surprised to find that we also got a 10% reduction in run time."

Graham Hodgkiss, Engineering Manager

LVD Slashes Setup Times at Electrium

LVD press brake technology has cut setup times by 70% and improved production speeds by 10% at a leading UK manufacturer of electrical equipment. Wythenshawe-based Electrium, now part of the Siemens group, has installed three LVD Easy-Form CNC press brakes to help it stay competitive in the face of ever increasing part variety and lower batch sizes.

Originally created as a management buyout from the Hanson Group, Electrium brought together a number of well-known electrical manufacturers, including Crabtree, Wylex and Volex. Under the MBO the emphasis had been on off-shoring high-volume production and consolidating the lower volume production at Wythenshawe. Since the site had originally been set up for volume production – predominantly using hard tooled power presses – it was very inefficient at coping with these lower volume demands.

More variety, smaller volumes

Following its takeover in 2006, Siemens gave Engineering Manager Graham Hodgkiss the responsibility for completely reorganizing the site to improve efficiencies and bring the facilities in line with the manufacturing requirement.

As Hodgkiss explains: “It was originally a medium to high-volume site, so we had to change our way of thinking to handle the influx of this new work. It was a massive investment after a period of downsizing.”

The key drivers were variety and volume. Customers wanted more variety in smaller volumes and more specials tailored to their specific needs – contributing to a sizable slice of the site’s production. More products were going direct to the retail trade too, which required a high degree of flexibility to meet its demands.

Hodgkiss says that, overall, the volume of cabinets and enclosures produced is pretty much the same as it has always been, but with much greater variety.

“Gone are the days when we were making ten or fifteen thousand of the same thing. We can literally be processing orders for ones or twos one minute; followed by orders for five or six hundred-off. So we needed equipment that was going to reduce the impact of the setup on the overall operation.”

Technology investment

Because it was designed for high-volume manufacturing, the existing equipment was really inefficient, with the setup time representing a significant proportion of the overall run time.

Hodgkiss’s first move was to take most of the work away from hard tooling onto punch presses – and he was able to streamline this very effectively by rationalizing the tooling used and sharpening up the quality of programming.

That left forming as the weak link, with five old press brakes creating a real bottle-neck. The average setup took 45 minutes and at around 50 setups a week that added up to a lot of lost production time.

As Hodgkiss explains: “Because of the variety of parts and massive setup times we weren’t cost-effective. I wanted to stop the rot, and the only way to do that was to get our efficiency right. There is only so much you can do with soft fixes; there comes a point where you have to invest in new capital equipment and get the latest technology to help you.”

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Graham Hodgkiss, Engineering Manager

He reviewed the market and asked various suppliers to carry out bending trials on parts they hadn't previously seen. LVD was the only one that was able to make the parts right the first time, which convinced him it was the right solution.

The initial investment was in two 100 ton 3m bed LVD Easy-Form® CNC press brakes and LVD CADMAN®-B 3D offline programming software, which were followed six months later by a 135 ton Easy-Form machine.

The majority of the work going through the sheet metal fabrication section is cabinets and enclosures. These range from 5.9″ x 5.9″ (150 x 150 mm) for the smallest domestic unit up to 3.9´ x 4.9´ (1.2 x 1.5 m) for industrial cabinets – and, as Electrium is actively developing new products, the equipment has been specified to handle panels up to 7.9´ (2.4 m). Most parts are made from 0.039″ x 0.047″ (1 x 1.2 mm) cold rolled mild steel, although the trend is towards material up to 1.6 mm as industrial unit production grows.

Increased efficiency

When the first two LVD Easy-Form press brakes were delivered they were installed alongside two of the old machines, so Hodgkiss had the chance to make a direct comparison. He set two trained industrial engineers to work, using certified methods to make independent studies on a typical benchmark part.

He says: "They both came up with the same results and backed up everything LVD had promised. We got a 70% reduction in setup times, and I was surprised to find that we also got a 10% reduction in run time. I knew the machines had a fast approach, but I didn't think that it would add that much to our efficiency."

The study was carried out on what was a typical component at the time. Since then more complicated products have been run where the setups on the old machines could take close to an hour. With the LVD machines, that was reduced to less than ten minutes – including programming.

A complete solution

Hodgkiss says that these impressive results are down to the combination of LVD's CADMAN-B 3D offline programming software and the Easy-Form's real-time laser bend angle measurement system.

"Offline programming removes the guesswork. When you watch a skilled press brake setter you see that the way they set up the job is very subjective. It's all down to the setter's skill, experience and judgement how he approaches the job. Nine times out of ten he will get it right, but in doing so he will probably waste three, four, maybe five blanks before he gets the first good one (the nature of the beast with old technology machines). The LVD technology eliminates that because you are getting it right first time every time."

The CADMAN software calculates the best way to make the part from the 3D digital model. It selects the correct tools with the right radius, automatically adjusts for spring-back, and the Easy-Form Laser system ensures that the right bend angle has been achieved.

"It's not subjective any more," says Hodgkiss. "The software knows the quickest route to achieve that part. It selects the tool segments and even tells the setter where to put them. What's more, the Easy-Form laser moves along the bed and shows exactly where the tool should be placed. There is no guesswork to it."

He adds that the Easy-Form's bend angle measurement system is absolutely essential to allow for variations in the material.

"The biggest problem is variability in the thickness of the material, particularly in the thin gauges we are using. I think it is worse now than it was because steel is sourced globally and you don't get the same consistency as before. You don't know from one batch to the next where it has come from, even from the same supplier. The tensile strength will vary too, so we need the technology of the machines to take out that variability.

"Also, because we are nesting components on the cold rolled sheet you could be bending across the grain, with the grain or at an angle to the grain, all on the same sheet. Those sort of things can cause you problems, the Easy-Form compensates for that as well.

"If you look at the setters, when they are running the old machines they are constantly having to check the parts – measuring bend angles during the run, not just on setup – they don't have to do that now."

Latest NEWS

From LVD Worldwide

LVD and Pullmax Merge Operations

In early 2011, LVD Company, n.v. and Pullmax AB entered into an agreement for the operational merger of sales, service, production and engineering development functions. This combining of forces provides a broader range of products, services and support to customers worldwide.

LVD now manufactures Pullmax punching machines for the global market and the two firms collaborate on research and development efforts for future punching products and technology.

The complete range of Pullmax punching machines is part of LVD's existing punch press product portfolio, making the LVD line the industry's most comprehensive punching product offering with a broad range of capabilities and an extensive line of automated systems.

For more information about the Pullmax Series, visit lvdgroup.com.

New Thailand Technology Center

LVD Thailand has opened a new technology center near Bangkok, Thailand in the Bangbuathong, Lumpo district. The center showcases LVD's latest punching, laser cutting, bending and software technology in a modern, state-of-the-art facility used for product demonstrations, customer training, educational seminars and open house events.

The addition of the center and the expansion of the LVD Thailand office represent LVD's strategic investment in the growing South East Asia market. To manage sales and service efforts in this region, LVD has appointed Sun Taechataratip to national sales manager and Chokchai Jongrakpinyokul to service manager.

Customers can now expect more dedicated service and support from a larger local subsidiary.

For more information or to arrange a tour of the technology center, please call + 66 2 5258621, or e-mail: sun@lvdthailand.com.

LVD Korea Established

LVD further expands its reach to Asia's growing metalworking community with the establishment of LVD Korea in South Korea.

The office is a dedicated LVD sales and service subsidiary providing full sales and service support to local customers.

LVD Korea's General Manager is DH Lee, formerly with Born Corporation, a long-time partner of LVD's in Asia. Mr. Lee has more than 25 years of experience in the sheet metal fabrication industry and has spent considerable time strengthening LVD's presence in South Korea.

Mr. Lee will be instrumental in further expansion efforts, including a soon to be established LVD Korea technology center in Seoul, which will house a range of LVD equipment for demonstration and training purposes.

For details, call + 82 50 2345 7801 or e-mail: DHL@lvdkorea.com.

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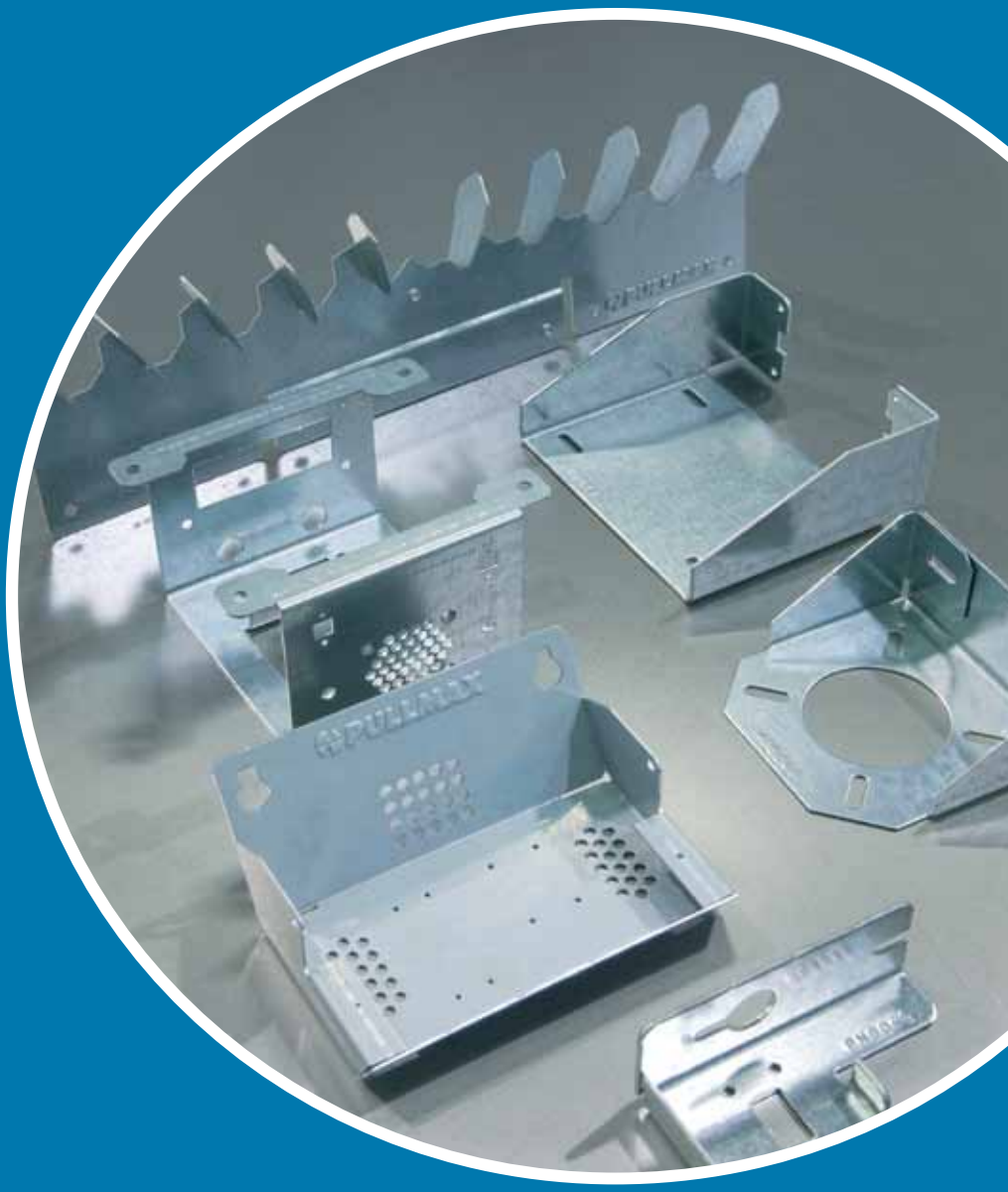

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