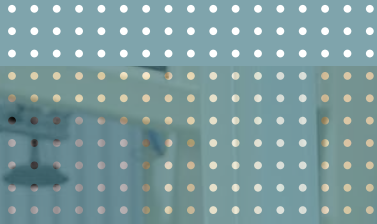# CADMAN®

## INTELLIGENT SOFTWARE

## FOR A BALANCED WORKSHOP

CADMAN®

LVD

# CADMAN

## INTELLIGENT SOFTWARE FOR A BALANCED WORKFLOW

**For over thirty years, LVD's CADMAN® programming software has maximised the machines' capabilities by integrating the key sheet metalworking processes of laser cutting, punching and bending.**

Today, the database-driven *CADMAN Suite* looks at the big picture and helps to streamline the complete fabricating process considering not just the processes of laser cutting, punching and bending, but also taking into account production control, communication and management. *CADMAN* provides users with live information to make informed choices, enabling optimised programming and maximised throughput in the workshop.

# INTEGRATED SOLUTIONS

INDUSTRY
4.0
READY

### CADMAN-B

Achieve the correct unfolded development first time and easily create the complex bending programs. *CADMAN-B* intelligently links the virtual world with the real world of bending.

### CADMAN-L

Automatic nesting, application of laser technology and automatic laser program generation is fully optimised through the use of *CADMAN-L*, for all skill levels.

### CADMAN-P

Powerful software to program the simplest part right up to the most complex 3D bent part, *CADMAN-P* provides a wealth of embedded intelligence to achieve an efficient and effective punch program.
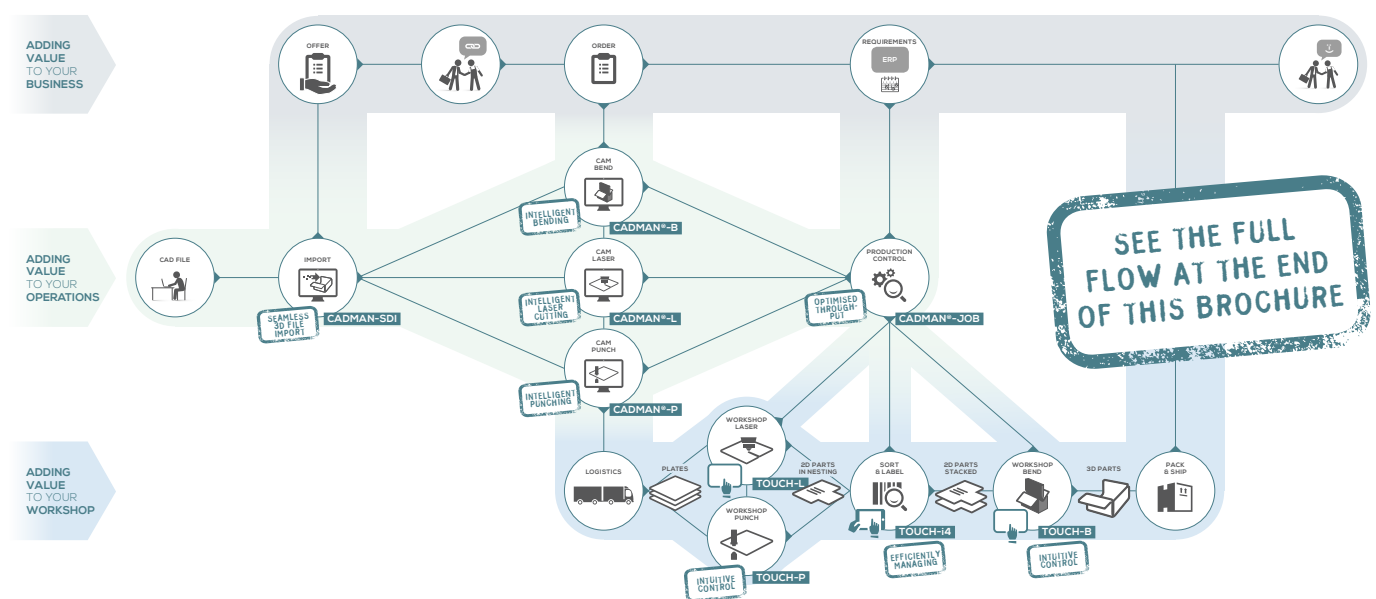
# WHY CADMAN?

## TIME

*CADMAN®* is designed to minimise set-up times, improve tool setups and efficiently managing jobs and offering significant time savings.

## QUALITY

With an extensive database for a wide array of technologies, materials, tools and integration with intuitive process control systems such as LVD's *Easy-Form®* adaptive bending system and *ALC®* Adaptive Laser Cutting, *CADMAN Suite* is designed for consistent, high-quality output backed by LVD's proven in-house expertise.

## FLEXIBILITY

Combining the key fabrication disciplines of design, programming and production control into a single package, *CADMAN* is known for its ease-of-use. *CADMAN* software is functional with endless sheet metal processes, as specialised as the products LVD customers create, PC based and Windows compatible.



## CADMAN-JOB

Organise your fabrication shop, classify and group parts to increase through-put, minimize set-ups and streamline flow.

## CADMAN-SDI

This **Smart Drawing Importer** allows fast CAD file import and efficient calculation of cost drivers. Using **BricsCAD®**, a robust 3D direct modeling CAD package, you can make any necessary part adjustments or modifications.

## TOUCH-i4

Communication and visibility of real-time information is the key to efficiency in today's fabricating environment. *TOUCH-i4* provides the information needed to effectively manage your fabricating workshop.

# TOUCH-i4

INDUSTRY
4.0
READY

## INTEGRATING INFORMATION INTUITIVELY IN INDUSTRY

*TOUCH-i4* is an industrial strength Windows-based tablet that provides an over-view of the entire fabrication workshop. *TOUCH-i4* generates live information needed to manage your networked LVD laser cutting, punching and bending machines.

*TOUCH-i4* collects real-time information from your LVD machine(s) powered by a centralised *CADMAN®* database to offer insight and flexibility to your daily operations. This information can be viewed and managed wirelessly on the shop floor with *TOUCH-i4*, allowing the user to make informed decisions based on lead-time, cost, technology and individual machine workload.

- KPI (Key Performance Indicators) history - full visibility and diagnosis of historical workshop performance including OEE analysis.
- Future workload – overview and plan future workload by overall capacity, by technology and by individual machine.
- Sort and validate – *TOUCH-i4* can be used to help sort and validate parts allowing users to streamline production orders ready for the next operation.

# CADMAN-JOB

INDUSTRY
4.0
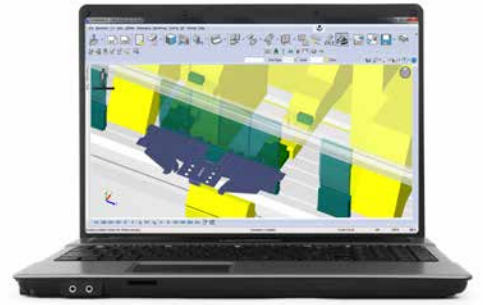READY

## INCREASED THROUGHPUT

*CADMAN®-JOB* provides the ideal solution to manage today's short lead-time, small batch, tight margin manufacturing culture.

*CADMAN-JOB* connects the front office intakes and processing of orders with the shop floor operations, providing a controlled process from the customer's order to the finished part. The software creates or imports production orders from an ERP system allowing users to generate jobs for bending, punching or laser cutting, minimizing tool/turret setup or lens/nozzle changes.

- Provides real-time visibility and full transparency of the parts and production orders live on the shop floor
- Organizes and schedules fabrication shop workload
- Classifies and groups jobs in most efficient manner
- Tracks progress of each part, job and production order
- Provides estimated and actual production time information
- Generates lists to launch any necessary re-works
- Collects all relevant machine and job data for statistical analysis

*CADMAN-JOB provides the ideal solution to manage today's short lead-time, small batch, tight margin manufacturing culture.*

# CADMAN-B

## THE BENCHMARK FOR BEND CAM SOFTWARE

After importing a 3D CAD part, *CADMAN®-B* is an expert in calculating bend allowances and determining the optimal bend sequence and gauge positions. This expertise is based upon *CADMAN*'s world class algorithms for unfolding and collision computation during the complete bending process.
*CADMAN-B* offers a simulation environment that visualizes the complete bend process with start to finish collision detection, as well as all gauge positions and tool setups.
This comprehensive simulation tool is open to all operator's fine tuning inputs.

*CADMAN-B makes the perfect link between virtual production engineering and real world bending.*

- Correct unfolding based on LVD's intelligent learning database, beyond other limited methods such as the DIN norm
- Extended batch processing ability that can be set up as a Solution Finding Service
- Automatic calculation of optimal bend sequence, gauging positions, tool set-ups and bend programs
- Automatic definition of inclined, parallel and multi-bends, as well as hemming and preliminary bends
- Processing all standard 3D CAD models such as SAT, STEP, IGES, and others
- Seamless linking to *CADMAN-P* or *L* for 2D part profiling
- Fully integrated with LVD's *TOUCH-B* controller for press brakes

# TOUCH CONTROLS

## INTUITIVE CONTROL

LVD *TOUCH*-series controls provide users with an icon driven touch control. Fully developed in-house LVD's touch controls dramatically reduce the learning curve for all operators by providing an **easy to use interface** for even the most complex applications.

- *TOUCH-B* controls for press brakes, *TOUCH-L* for lasers and *TOUCH-P* for punching machines are available
- Brings the machine's technology to the operator finger tips
- Works with centralised *CADMAN* database for full process integration
- Delivers high performance
- Is *CADMAN-JOB* compatible

# CADMAN-L

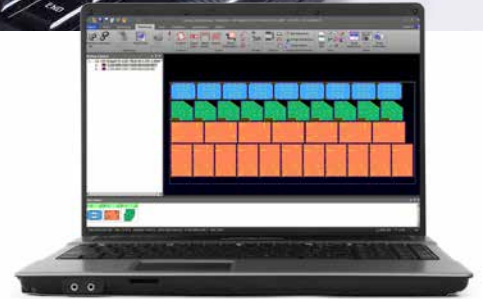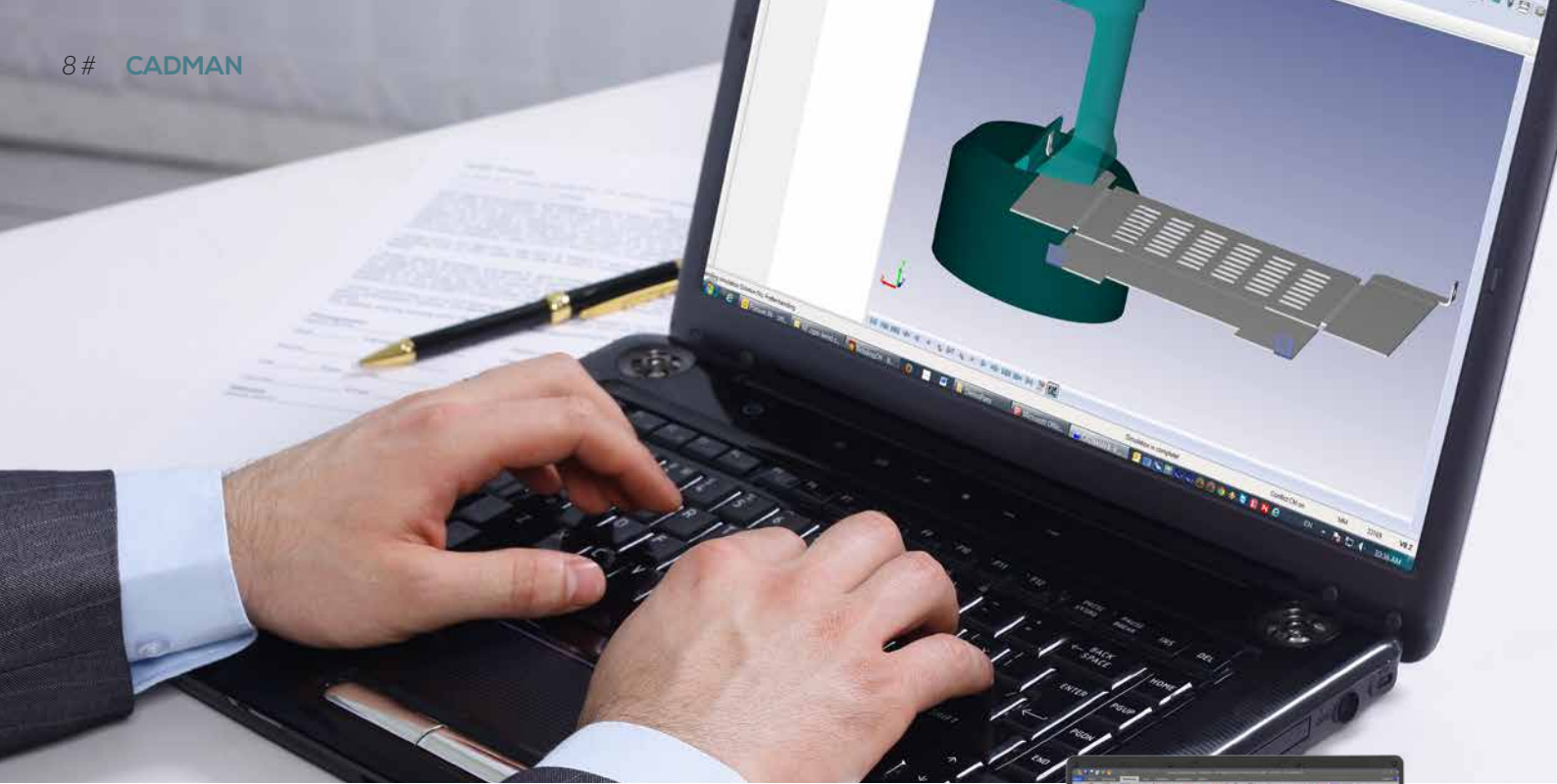## REVENUE BOOSTER FOR YOUR LASER CUTTING MACHINE

*CADMAN®-L* offers flexibility and customisation in many ways.
Multiple laser cutting technology tables are available and can be assigned to any material, any thickness, even to individual contours within the same part. The CAM programmer's skill set and ideas are not compromised because of the highly customizable GUI allowing users of all skill levels to get the best of the machine. Initiated from *CADMAN-JOB*, *CADMAN-L* imports the correct unfolded flat part from *CADMAN-B*, then nests and processes them automatically to the production orders at hand.

> *CADMAN-L is the perfect software tool to realize the full potential of your LVD laser cutting machine, enabling the user to exploit the full functionality of the machine.*

- Complete flexibility to manually or automatically nest laser parts
- A Minimum Heat option minimizes the heat build-up in any particular area of the plate
- The On-the-Fly Piercing and Cutting option allows high speed cutting of grids in thin materials
- The powerful collision avoidance option gets a new dimension with the On-the-Fly Piercing and Cutting option for thin materials
- Larger inside contours can be cut into multiple scrap pieces for easier evacuation
- Fully integrated with LVD's *TOUCH-L* controller for laser cutting machines

# CADMAN-P

## POWERFUL CAM DIMENSION TO YOUR PUNCHING MACHINE

*CADMAN®-P* is a flexible, powerful and user friendly software system to tackle your punching needs. It is capable of processing all your parts from the simplest single part right up to a full batch order of complex parts.

*CADMAN-P* offers many automated processes such as punch sequencing macros, automatic tool selection, clamp positioning and others to maximize your machines output with ease.

*CADMAN-P* now draws from the calculation power of *CADMAN-B* to program parts that can be bent on LVD's latest addition in its range of punching machines.

- Customizable GUI ribbon
- Incorporation of custom macros for repetitive multiple tool instructions
- Powerful and extensive parametric database of punches and dies, multi-Tools and tool configurations
- Provides full support for advanced punching functions, including multi-tools, wheel tooling and opti-bend (bend up to 75 mm high)
- Common and non-common line punching
- Automatic punch selection, assignment and tool turret / magazine configuration
- Complete support for complex punching, forming, bending and tapping with optimization of tool changes and sequencing
- Fully integrated with LVD's *TOUCH-P* controller for punching machines

*Tackling any punch, form, tap or bend operation on an LVD punching machine has never been easier with the versatile CADMAN-P software.*

# CADMAN-SDI

## EASY CAD FILE IMPORT
## AND CALCULATION
## OF COST DRIVERS

Creating accurate estimates is critical to keeping your shop productive and profitable, but estimating production costs can be a time-consuming process. With *CADMAN®-SDI*, generating estimates from imported CAD files is faster and easier.
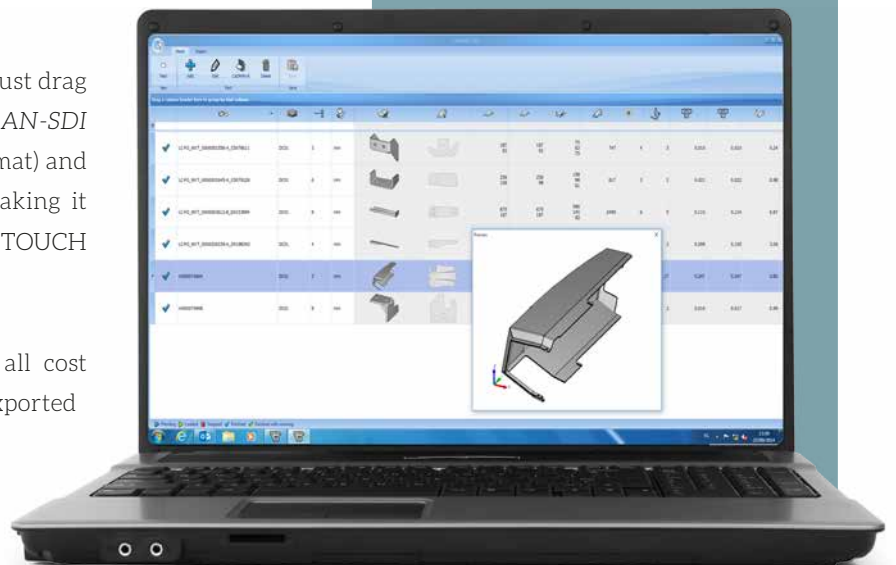
*CADMAN-SDI* consists of two powerful modules:

**CADMAN-SDI** makes CAD file import simple, just drag and drop your drawing into the module. *CADMAN-SDI* converts the file to OSM (Open Sheet Metal format) and stores it in the central *CADMAN* database making it directly accessible for all other *CADMAN* and TOUCH products.

As the drawing is converted into the OSM, all cost drivers are displayed on the screen and can be exported to create an accurate cost estimate.

**BricsCAD®,** a robust 3D direct modeling CAD package, allows the 3D sheet metal file to be reviewed in detail, modified or corrected as required. It provides recognition of bent features, lets you modify a junction into a bend, change overlaps of bent faces, create notches, and more.

Today the latest integrated, database-driven *CADMAN®* Suite software looks at the big picture and helps to streamline the complete fabricating process with optimized and dynamic Art to Part cycle times considering not just the processes of laser, punching and bending; but also takes into account production control, communication and management. *CADMAN* provides users with live information to make informed choices enabling optimised programming and maximised throughput in the workshop.
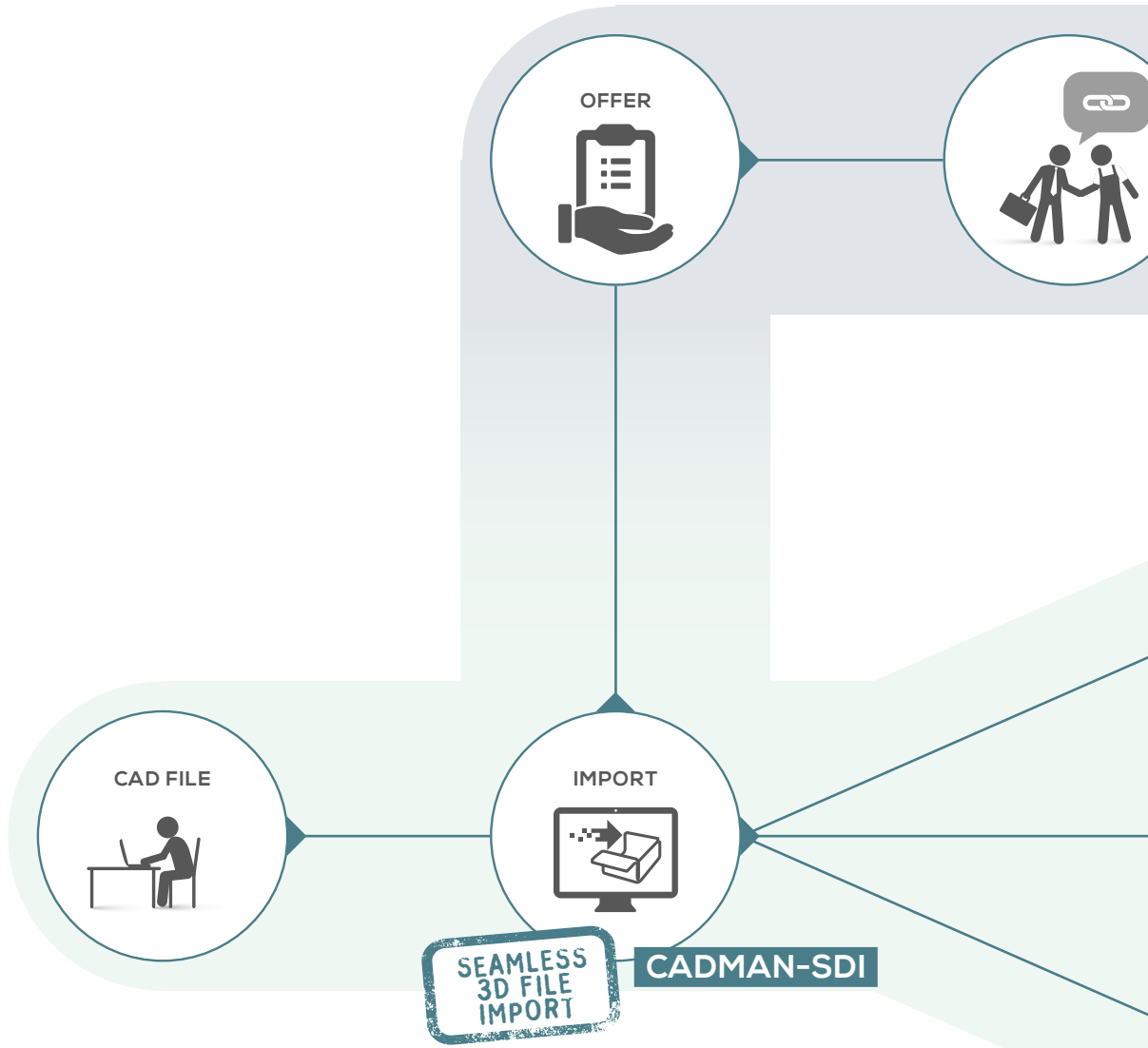
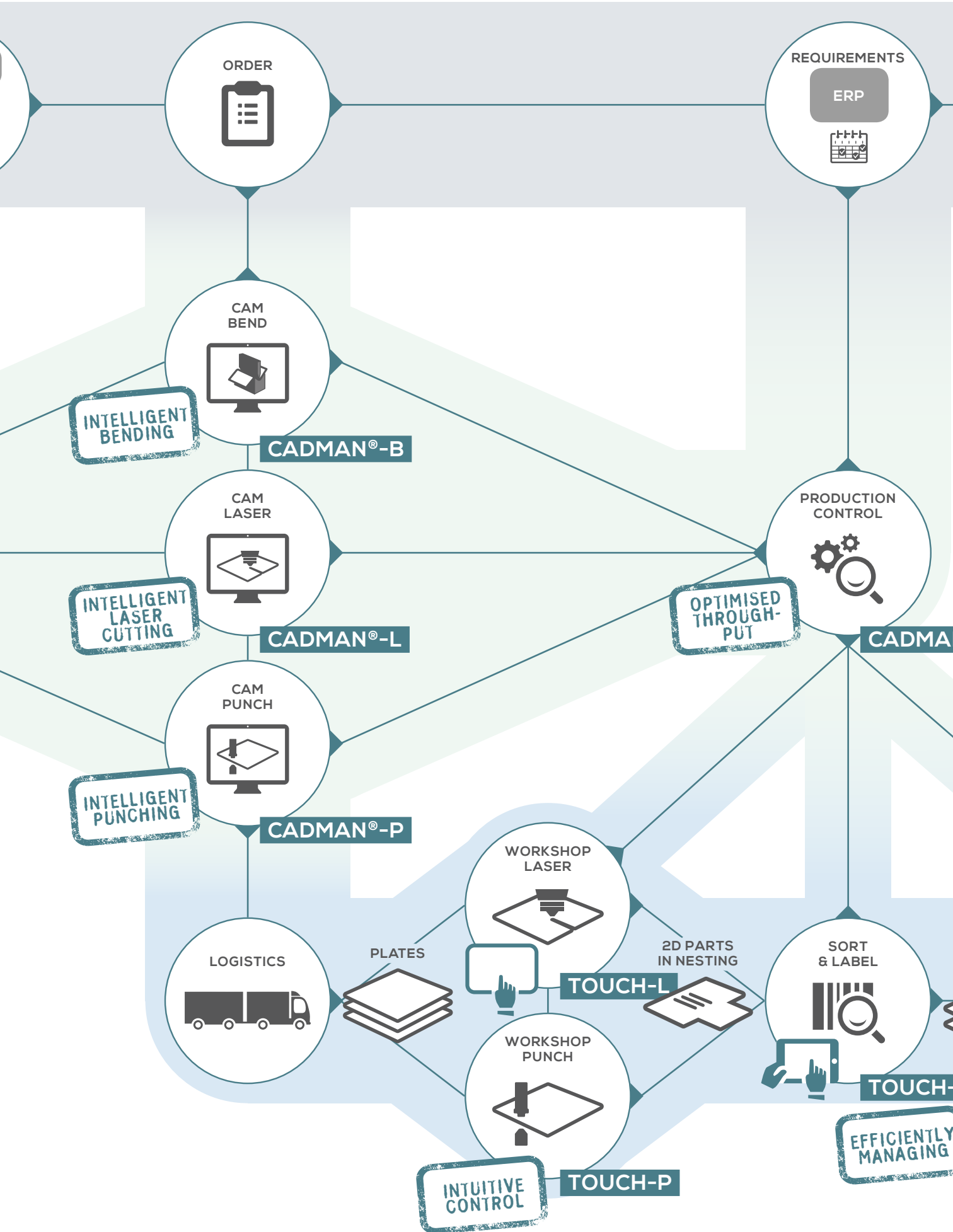# CADMAN SOFTWARE

## LVD SOLUTIONS FOR OPTIMISED WORKFLOW

*Today's fabrication process is full of challenges. Discover LVD's solutions that are indispensable to streamline your workshop.*

**LVD**

ADDING
VALUE
TO YOUR
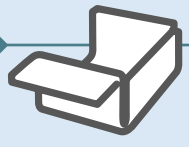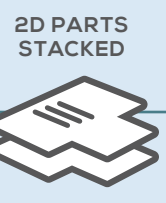BUSINESS

OFFER

ADDING
VALUE
TO YOUR
OPERATIONS

CAD FILE

IMPORT

SEAMLESS
3D FILE
IMPORT

CADMAN-SDI

ADDING
VALUE
TO YOUR
WORKSHOP

ORDER

REQUIREMENTS

ERP

CAM
BEND

CADMAN®-B

INTELLIGENT
BENDING

CAM
LASER

CADMAN®-L

INTELLIGENT
LASER
CUTTING

PRODUCTION
CONTROL

OPTIMISED
THROUGH-
PUT

CADMA

CAM
PUNCH

CADMAN®-P

INTELLIGENT
PUNCHING

WORKSHOP
LASER

TOUCH-L

LOGISTICS

PLATES

2D PARTS
IN NESTING

SORT
& LABEL

TOUCH-

WORKSHOP
PUNCH

TOUCH-P

INTUITIVE
CONTROL

EFFICIENTLY
MANAGING

N®-JOB

2D PARTS
STACKED

WORKSHOP
BEND

3D PARTS

PACK
& SHIP

-i4

TOUCH-B

INTUITIVE
CONTROL

*Example of information flow in a sheet metal workshop*

# SERVICE
# OUR EXPERTISE

## IN-HOUSE "KNOW-HOW" WORKING FOR YOU

LVD's team of experienced software application specialists are on hand to ensure that customers get the very best from LVD's machinery and software solutions. Various *CADMAN®* software support packages are available for updates, upgrades and other value adding services such as support priority and training discount vouchers.

*LVD ensures that customers get the very best from LVD's machinery and software solutions.*

Key benefits:
- Dedicated *CADMAN* customer support specialists
- LVD *CADMAN* software experts offer contract holders daily assistance
- Priority system for contract holders
- Free Teleservice program for contract holders
- Update training, regular update training sessions, learn about the latest technology
- Advanced software training.
- Fully equipped LVD training centres worldwide

## SUBSIDIARIES

**LVD BeNeLux nv**
Gullegem, Belgium

**LVD do Brasil Ltda.**
Joinville, Brazil

**LVD GmbH**
Lahr, Germany

**LVD Italia s.r.l.**
Parma, Italy

**LVD Korea Ltd.**
Inchon City, Korea

**LVD Malaysia Sdn Bhd**
Shah Alam, Malaysia

**LVD Norway AS**
Oslo, Norway

**LVD Polska Sp. z.o.o.**
Kedzierzyn-Kozle, Poland

**LVD Pullmax Ltd.**
Oxfordshire, United Kingdom

**LVD S2/S3 s.r.o.**
Tornala, Slovakia

**LVD s.a.**
Raismes, France

**LVD-Strippit India Pvt. Ltd.**
Bangalore, India

**LVD-Strippit Shanghai Co. Ltd.**
Shanghai, China

**LVD Sweden AB**
Gothenburg, Sweden

**LVD Thailand Ltd.**
Bangkok, Thailand

**LVD Center P.T.**
Jakarta, Indonesia

## JOINT VENTURES

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