

*Hydraulic  
press brakes*

# TOOLCELL

PRESS BRAKE AUTOMATION REDEFINED



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## PRESS BRAKE AUTOMATION REDEFINED

ToolCell is a fully-equipped hydraulic press brake with integrated automatic tool changer. It is the ultimate bending solution for small to medium batches, a high product mix and increased part complexity.





1. Variable frequency drive
2. Lightzone front and back
3. Top cover
4. Status lighting
5. Lightguard
6. Hydraulic clamping on ram
7. Frame accepts front supports
8. Easy-Form® Laser
9. Hydraulic clamping on table
10. 6-axis modular backgauge
11. Tool changer
12. Control pedal, second foot pedal standard on 4-meter machines
13. Tooling warehouse
14. Robust frame
15. Touch-B control
16. Air conditioner for electrical cabinet
17. Extended control arm
18. Lazer Safe

# FULLY-EQUIPPED MACHINE

ToolCell is designed to exceed your expectations and includes as standard the following features:

## 1 Variable frequency drive

A variable frequency drive adjusts the motor specifications to closely match the output requirements of the ToolCell, resulting in considerable energy savings.

## 2 Lightzone front and back

The backgauge and front work zone areas are illuminated for improved visibility.

## 3 Top cover

The closed upper side of the machine protects critical components from dust and dirt.

## 4 Status lighting

LED lights indicate the machine status.

## 5 Lightguard

A SICK light curtain helps enhance safety during tool change operations.

## 6 Hydraulic clamping on ram



Quick-acting hydraulic clamping installed on the ram.

## 7 Frame accepts front supports

The frame is enabled to accept optional front sheet supports.

## 8 Easy-Form® Laser

LVD's adaptive bending system ensures angle accuracy from the first to the last part.

## 9 Hydraulic clamping on table

Quick-acting hydraulic clamping with hardened inserts installed on the table.

## 10 6-axis modular backgauge



A 6-axis backgauge is automatically positioned for optimum bending results.

## 11 Tool changer



The backgauge with integrated grippers loads and unloads tools for fast changeover and high productivity.

## 12 Control pedal, second foot pedal standard on 4-meter machines

## 13 Tooling warehouse



A stadium for two complete lengths of punches and five complete lengths of dies is integrated inside the machine.

## 14 Robust frame

A robust frame design ensures accuracy. All ToolCell models have a one-piece welded frame that can be installed at floor level.

## 15 Touch-B control

LVD's latest 19" touch screen control features intuitive graphical icons used to control all parameters of the machine for fast and efficient operation.

## 16 Air conditioner for electrical cabinet

## 17 Extended control arm



## 18 Lazer Safe



Lazer Safe helps provide advanced safety and operator protection.

## 19 Network ready



The machine control and software are designed to connect to other machines and feed their information to a central database.

## 20 Centralised database

Machine data and data stored offline are gathered in a central, intelligent database. Along with real-time feedback from the machine, this provides the information to make the right decisions.

## 21 Remote support

ToolCell is equipped to allow remote machine and software support via a secured and encrypted connection.

## 22 Diagnostics/monitoring



Remote diagnostics and monitoring tools ensure efficient and timely service support.

## 23 Interface second screen

# TIME-SAVING FACTORS

When you shorten product lead time, you improve your competitive position. ToolCell helps you manage your stock levels so you can manufacture the exact quantity just in time for the production line.



## LARGE TOOLING WAREHOUSE

An integrated storage of top and bottom tooling is located under the machine's backgauge, significantly minimising tool changeover time. The tooling stadium holds up to two complete lengths of punches and five complete lengths of dies. Tooling flexibility and space-saving all in one compact design.

## QUICK TOOL CHANGER

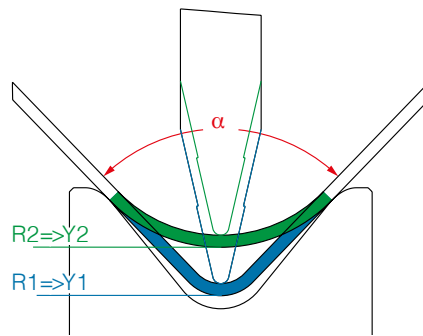
Innovative grippers built into the machine's backgauge fingers serve as the tool changer mechanism. As the operator prepares for the next job, selecting the worksheet or moving blank parts to the machine, ToolCell automatically changes top and bottom tooling.





## EASY-FORM® LASER ADAPTIVE BENDING

LVD's adaptive bending system Easy-Form® Laser (EFL) ensures the first bend is accurate every time. The EFL system transmits the digital information in real time to the CNC control unit, which processes it and immediately adjusts the position of the punch to achieve the correct angle. The bending process is not interrupted and no production time is lost.



The unique design of the EFL system allows the machine to adapt to material variations such as sheet thickness, strain hardening and grain direction, automatically compensating for any changes.

*“The ToolCell reduces setup time, increases flexibility and makes it easier to change tools.”*

## CADMAN®-B: PRECISE SET-UP FOR EVERY JOB

Program parts offline using LVD's CADMAN-B bend software. The module can visualise the complete bend process, calculates bend allowances and determines the optimal bend sequence, gauge positions and tool set-ups. Seamlessly transfer 3D-simulation files to the machine ready for production.



# TOOLCELL PLUS

FOR HIGHER FLANGES

**ToolCell Plus is the answer to an increased need for taller tools to bend parts with higher flanges.**

This tool changing press brake brings more versatility to the table. With an increased open height and stroke, the machine can house taller tools.

## KEY FEATURES:

- Open height: 570 mm, optional 670 mm
- Stroke: 300 mm, optional 400 mm
- Increased flexibility to bend parts with higher flanges
- Fit for LVD's series of tall upper and bottom tooling

Specifically for ToolCell Plus, LVD has designed a series of tools: 231 mm high punches and 130 mm high dies. These high-quality tools are hardened up to a minimum of 56 HRC. All dies feature a STONE radius, a progressive radius on both sides of the V-opening to minimise part marking.





# OPTIONS

Choose from a range of options to further customise ToolCell: add front sheet supports or sheet followers, increase table-ram or stroke distance by 100 mm, choose a plexiglass back, incorporate a robot interface.

## Punches and dies



The tooling stadium can be equipped with a flexible tooling configuration to suit specific application requirements.

## Plexiglass back



## Front supports



## Sheet followers



# INTELLIGENT WAREHOUSE

The tooling warehouse is integrated into the machine, not taking extra space next to it. It is not only space-saving but also intelligently configured exactly to your needs.

## Organise your warehouse

The ToolCell's tooling warehouse is configured to meet your specific bending requirements. Our bending specialists will select together with you the necessary tooling for your applications. LVD offers a range of tooling options using standard or taller punches with various radii and V-dies with openings from 6 to 50 mm.



## Tooling rotation

LVD helps protect your tooling investment by continually rotating tooling to allow for even wear. After use, the tool changer moves the tool to a new location in the warehouse. Doing so keeps individual tools from excessive use and extends the life of all tooling in the warehouse.

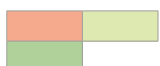
## Smart setup

CADMAN-B programs the complete bend process including tool setups offline. As a result, the machine is able to set up tools automatically. The operator does not require knowledge of tool setups, and can start production immediately using the data made available by the Touch-B control.

## Tooling range

ToolCell press brakes use LVD dies and W style punches. The standard ToolCell also allows you to choose between two sets of punch and die heights: standard and on demand.

ToolCell	Table width	STANDARD		ON DEMAND	
		Punch	Die height	Punch	Die height
135/30	120 mm	10 W	90 mm	15 W	130 mm
220/30	120 mm	10 W	90 mm	15 W	130 mm
220/40	120 mm	10 W	90 mm	15 W	130 mm
220/30 Plus	200 mm	15 W	130 mm	/	/
220/40 Plus	200 mm	15 W	130 mm	/	/

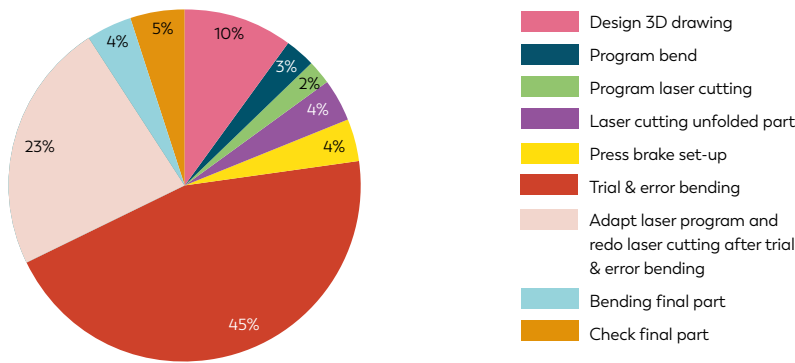


ToolCell combinations  
ToolCell Plus combinations

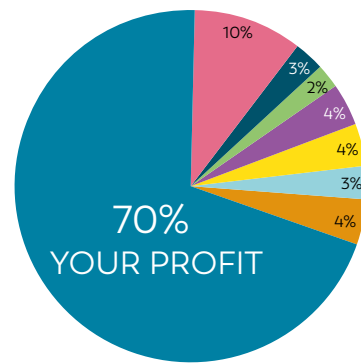
# CONVENTIONAL vs LVD TECHNOLOGY

The art-to-part time, which is the amount of time necessary to obtain the first correctly bent part, is substantially different between conventional bending and LVD's Easy-Form<sup>®</sup> Laser adaptive bending system:

## Conventional method without LVD database and without angle control







## Easy-Form<sup>®</sup> Laser system with LVD database and angle control



## Step up to ToolCell to achieve the ultimate level of throughput 45% extra throughput compared to Easy-Form

Sample parts featured on brochure cover:

Part	Unfolded	Material	Sheet thickness	Dimensions (mm)	Bends	Tool stations	Tool set-up	Bend time	Gain	Extra throughput
		AlMg3	2 mm	663 221	13	7	EFL: 6'50" TC: 2'48"	2'40"	4'02"	1.5 parts
		DC01	1.5 mm	498 426	10	5	EFL: 5'30" TC: 1'45"	2'35"	3'45"	1.45 parts

EFL : Easy-Form machine  
TC : ToolCell

## Art-to-part time

Conventional machine	100%	
Easy-Form machine	30%	70% time gain
ToolCell	16%	84% time gain

# TECHNICAL SPECIFICATIONS

TOOLCELL		135/30	220/30	220/40	220/30 PLUS	220/40 PLUS
Pressing force	kN	1350	2200	2200	2200	2200
Pressure	bar	290	285	285	285	285
Working length	mm	3050	3050	4000	3050	4000
Distance between uprights	mm	4000	4000	5040	4000	5040
Stroke	mm	300-400	300-400	300-400	300-400	300-400
Distance table/ram	mm	500-600	500-600	500-600	570-670	570-670
Table width	mm	120	120	120	200	200
Maximum load table	kN/m	2000	2000	2000	2500	2500
Working height	mm	970	970	970	970	970
Approach speed*	mm/sec	180	120	120	120	120
Working speed**	mm/sec	22	21	21	21	21
Return speed	mm/sec	200	200	200	200	200
Main motor	kW	22	37	37	37	37
Weight	kg	18,500	24,500	27,500	25,000	28,000
Oil tank	L	250	350	350	350	350

\*For CE-countries only if the machine is equipped with an optional safety system.

\*\*For CE-countries working speed is limited to safety norm.

Specifications subject to change without prior notice.



LVD Company nv, Nijverheidslaan 2, B-8560 GULLEGEM, BELGIUM  
Tel. +32 56 43 05 11 - marketing@lvdgroup.com - [www.lvdgroup.com](http://www.lvdgroup.com)

For full address details of your local subsidiary or agent, please visit our website.

