Hydraulic press brakes

TOOLCELL

PRESS BRAKE AUTOMATION REDEFINED

LVDGROUP.COM

LVD

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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. Turbo hydraulic 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 machines 4 m and larger
13. Large tooling warehouse
14. Robust frame
15. Touch-B control
16. Air conditioner for electrical cabinet
17. Extended control arm
18. Lazer Safe

STANDARD FULLY-EQUIPPED

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

1 Turbo hydraulic drive

A variable pump maximises machine efficiency. The pump regulates the flow rate to achieve optimal machine speed, avoiding unnecessary oil heating and energy waste. No energy is lost when the machine is holding the ram in position under pressure or when operating at low capacity.

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 patented angle measuring and correction technology ensures consistency 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 machines 4 m and larger

13 Large 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. ToolCell models up to 220 ton/4 m have a one-piece welded frame that can be installed at floor level. Longer bed lengths and higher pressing forces may require modified floor arrangements.

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 Database

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

21 TeamViewer ready

ToolCell is prepared for TeamViewer, a dynamic tool that provides quick, efficient online machine and software support.

22 Diagnostics

Remote diagnostics via a secured connection provide access to LVD expert 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.

TOOLING WAREHOUSE

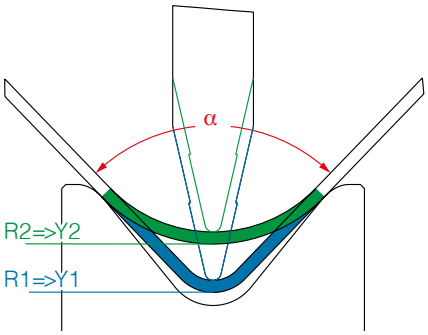
An integrated storage of top and bottom tooling is located under the machine's backgauge, significantly minimising tool changeover time. The tooling stadium holds up to two complete lengths of punches and five complete lengths of dies. Tooling flexibility and space-saving all in one compact design.

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 patented in-process angle monitoring 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 ram/punch to achieve the correct angle. The bending process is not interrupted and no production time is lost.

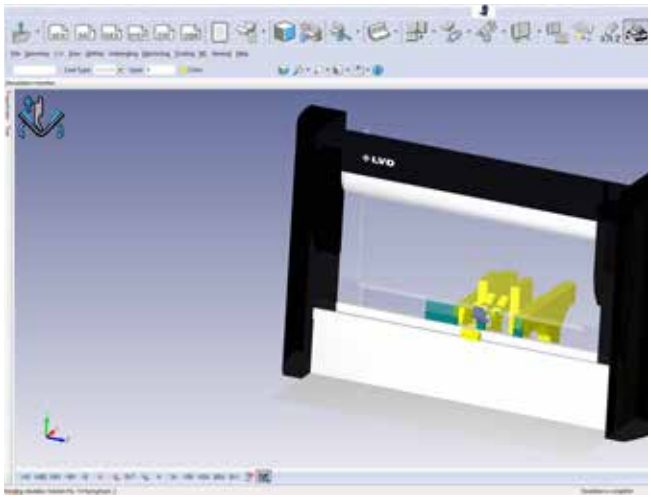


The unique design of the EFL system allows the machine to adapt to material variations such as sheet thickness, strain hardening and grain direction, automatically compensating for any changes.

"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 XT

EXTENDED BENEFITS

With ToolCell XT, short for Extended, LVD offers a ToolCell that can house 50% more tools than the standard ToolCell for increased flexibility.

Loyal to the ToolCell concept, all tools are held within the machine's footprint: three complete rows of punches and seven complete rows of dies, each row containing 12 toolboxes. The press brake minimises changeover times and maximises throughput and productivity.

KEY FEATURES:

- 50% more tool capacity than the standard ToolCell
- Automatic calculation of the optimised tool change trajectory
- More toolboxes
- Top cover plate protects machine components
- Reduced changeover times
- Precise, automated tool positioning
- LVD's Easy-Form® Laser adaptive bending system
- Integrated with LVD's CADMAN® software
- Equipped with Lazer Safe

ToolCell XT lets you tackle more diverse parts, split up tooling by material type, switch between stainless steel and mild steel. This press brake is sure to maximise your productivity.

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:

- Extendable open height: from 570 up to 670 mm
- Extendable stroke: from 300 up to 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 new 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 with 100 mm, choose a plexiglass rear, incorporate a robot interface.

Punches and dies

The tooling stadium can be equipped with a flexible tooling configuration to suit specific application requirements: standard punches with a range of radii, as well as V-dies with opening widths from 6 to 50 mm.

Rear in plexiglass

Front supports

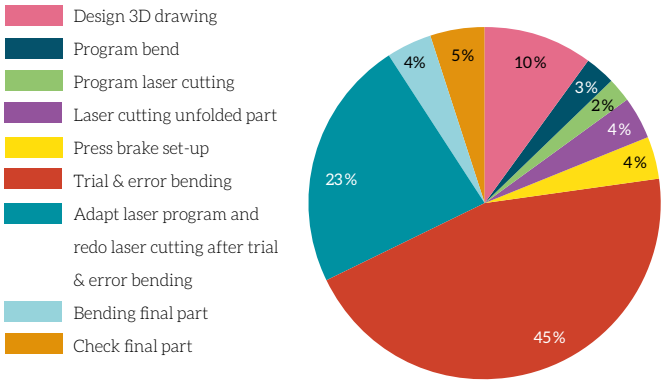
Sheet followers

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® Laser adaptive bending system:

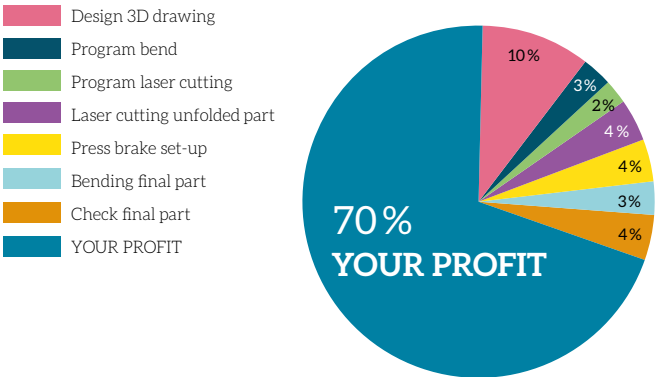
Conventional method

without LVD database and without angle control



Easy-Form® Laser technology

with LVD database and angle control



Art-to-part time

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

Step up to ToolCell to achieve the ultimate level of throughput

45% extra throughput compared to Easy-Form

Parts featured on brochure cover :

Part	Unfolded	Material	Sheet thickness	Dims (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 *TC : ToolCell (includes EFL)*

TECHNICAL SPECIFICATIONS

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

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