



CNC TURRET PUNCH PRESSES

STRIPPIT V-SERIES



Powerful Production Performance

High level production applications demand high productivity, durability, easy set-up and reliable operation. The V-Series of thick turret punch presses delivers all this and the unparalleled part quality you expect from LVD technology.

Engineered for high productivity and long life, these robust, full-featured machines offer a large turret capacity with an exceptionally versatile mix of stations and the largest feed clearance in the industry (25 mm), along with powerful control capabilities and programmable features that allow V-Series machines to operate with minimal intervention. Available in 200 or 300 kN configurations, V-Series machines punch materials up to 6,4 mm with a maximum hit rate of 1000 HPM at 1 mm pitch.

The large turret capacity allows up to 48 stations with three 88,9 mm indexable stations on 300 kN models and up to 34 stations with four indexable stations on 200 kN models. The 300 kN models also allow one additional fixed 88,9 mm station or one fixed 114,30 mm station for large parting tools, louvers or special forms. The auto-indexing stations accept a variety of indexable Multi-Tools to enhance capability and flexibility while reducing set-up time.

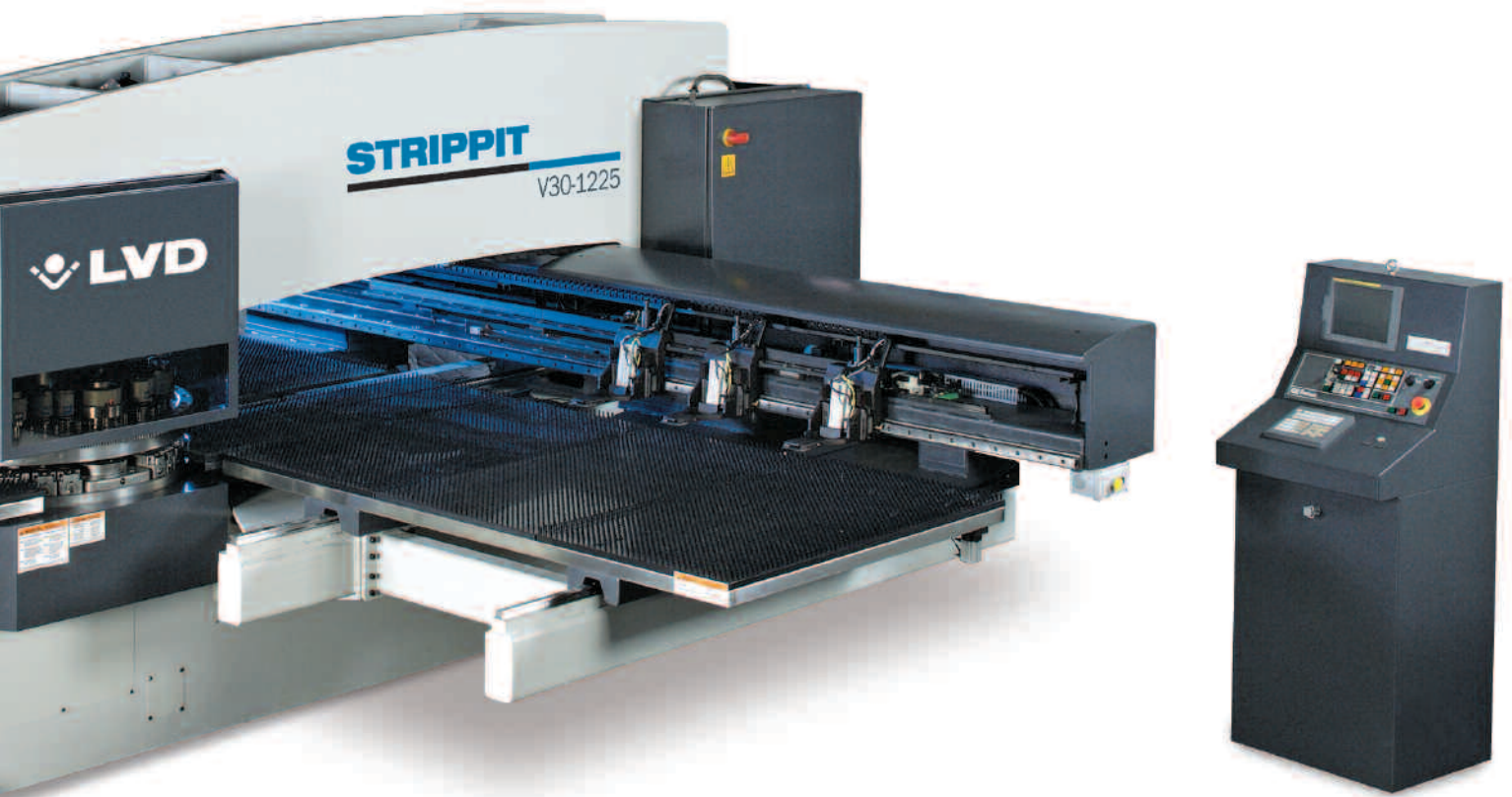
Programmable relocatable work clamps and a programmable parts chute reduce set-up time and operator intervention. The patented Smart Stroke® feature automatically optimizes the ram stroke for greater productivity while Smart Clamp™, another standard feature, automatically determines exact clamp locations to provide the smallest possible no punch zones. Productivity can be further enhanced with the addition of high performance options such as automatic load/unload systems and robotic parts sorting.



All this power and versatility is built on a heavy-duty, stress-relieved frame that provides exceptional stability for precision punching and reduces noise, shock and vibration to maximize machine and tooling life. Combined with an advanced table positioning system, this rugged frame design achieves finished part accuracy of $\pm 0,1$ mm with a repeatability of $\pm 0,05$ mm over the entire table.

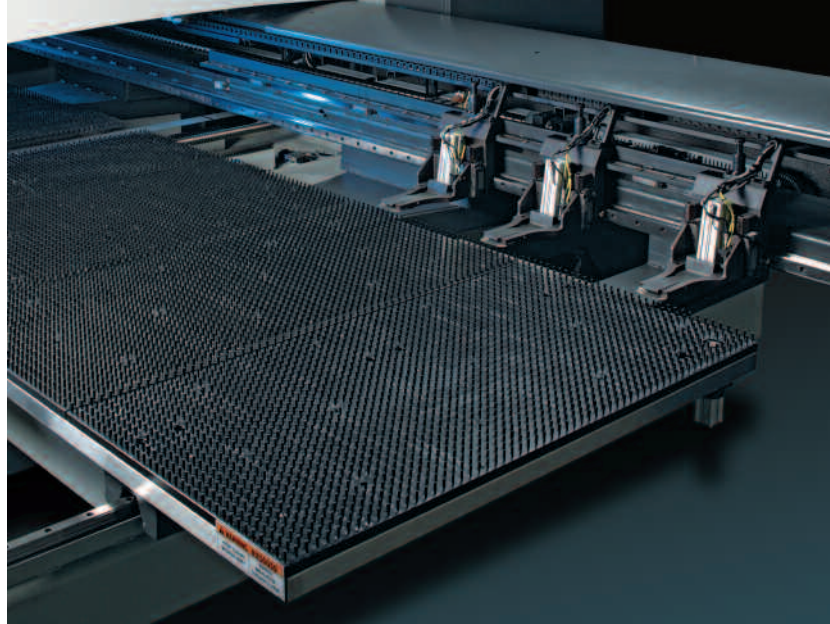
The V-Series design also has no rail or table obstructions in the workspace area, allowing the operator easy access to load full size sheets.

For fast set-up, exceptional flexibility, reliable operation and improved uptime, a V-Series punch press is the intelligent choice for high production punching.

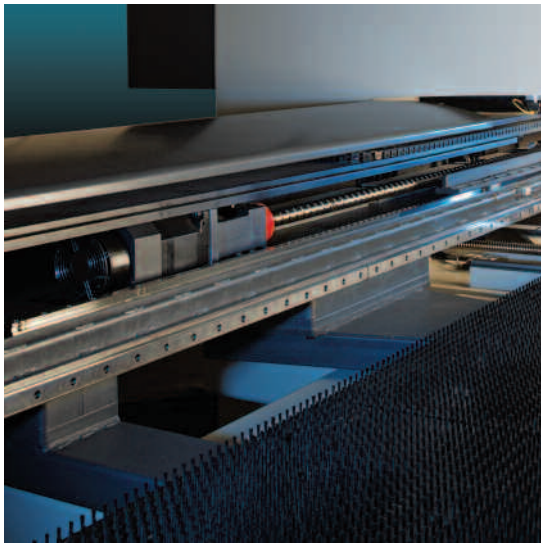


Strippit V-Series turret punch presses are available in 200 or 300 kN configurations.

Engineered for Productivity



A combination ball/brush or all brush table minimizes noise and part scratching.



Direct drive axes eliminate backlash.



Programmable work clamps reduce or eliminate no punch zones.

Precision Positioning Maximizes Accuracy

V-Series machines feature a state-of-the-art positioning system that combines heavy sheet carrying capacity with accurate motion control to produce finished part accuracy of $\pm 0,10$ mm with a repeatability of $\pm 0,05$ mm over the entire table. The use of programmable work clamps reduces or eliminates no punch zones while maintaining the precision needed to produce high quality parts. The accuracy of these finished parts ensures the success of secondary bending and assembly operations.

- Direct drive axes eliminate backlash for long term accuracy and reliability.
- Patented sheet repositioning system handles larger sheets and special part configurations.
- A sophisticated table guiding system handles heavy load capacities.

Minimal No Punch Zones

Three standard programmable work clamps can be individually programmed on the X carriage and relocated to a new position within the part program. As one clamp is moved, the other two hold the sheet firmly in place.

- Smart Clamp™ automatically determines exact clamp locations to provide the smallest possible no-punch zone.
- Distance between work clamps can be maximized for improved stability while punching large sheets.

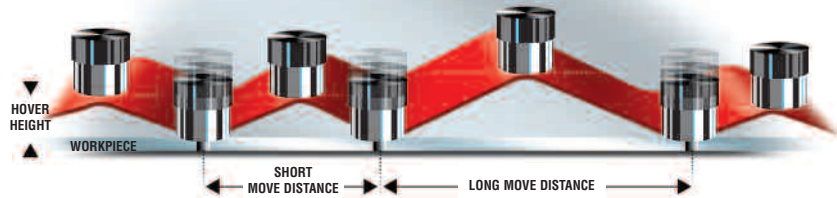
Speed & Longevity

An advanced servo hydraulic press drive and easy-to-use interactive software optimize high-speed operation while reducing noise and shock. This increases machine longevity and reduces tool wear in high-speed processing applications.

Intuitive Programming for Easy Set Up & Operation

The advanced programming features of V-Series machines simplify set-up and minimize operator intervention during production runs. Tool information can be entered quickly and easily with the innovative user interface. Operators interact with a single graphic screen that provides tool images to aid in selection. No tool measurements or electronic adjustments are necessary for routine tooling applications. The operator simply selects the tool to be used – punching, forming, wheel tool, scribing, marking or tapping – and the control software automatically determines the correct stroke settings.

HOW SMART STROKE® MAXIMIZES PRODUCTIVITY



Smart Stroke® automatically selects the optimum hover height for each table move

Programmable Ram Capabilities

The hydraulic ram permits electronic adjustments that take advantage of this intuitive control interaction. Users can apply custom settings or alterations to stroke elements, such as depth offset, dwell and ram speed, to further maximize machine capabilities.

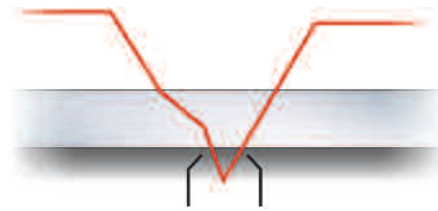
Smart Stroke® Optimizes Productivity

Patented Smart Stroke® programming maximizes productivity by automatically calculating the optimum hover height for every stroke of the ram, depending on your application. Choose from three programmable ram modes:

Standard Smart Stroke - The tool is kept close to the material on short table moves. As hits move farther apart, the software

automatically increases the ram hover height to provide clearance for sheet warpage.

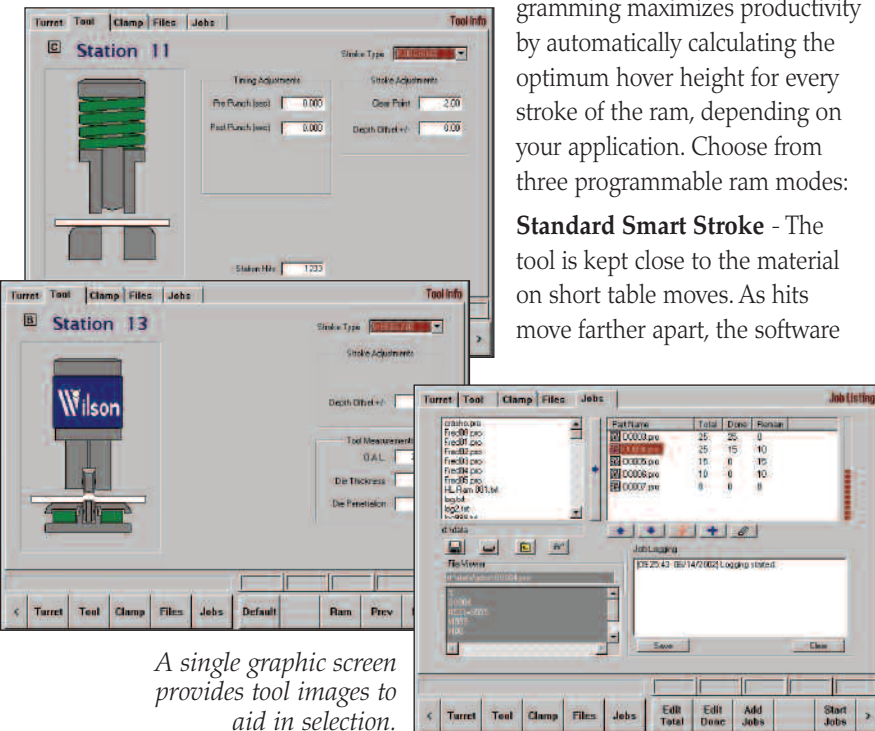
Forming - A dwell can be programmed at the bottom of the stroke, allowing the material to flow more completely into the desired shape, minimizing springback and improving the quality of the formed part.



The Quiet Punch feature helps reduce noise and shock.

Quiet Punch - The tool is programmed to rapidly approach the material, then slow to enter the material and remain slow until shearing is complete. Once breakthrough occurs, the ram completes its cycle at rapid speed. This process reduces noise and shock while maintaining productivity.

The Smart Stroke system also allows the machine to run mechanical machine programs with no need to edit traditional nibble routines or input hover height commands.

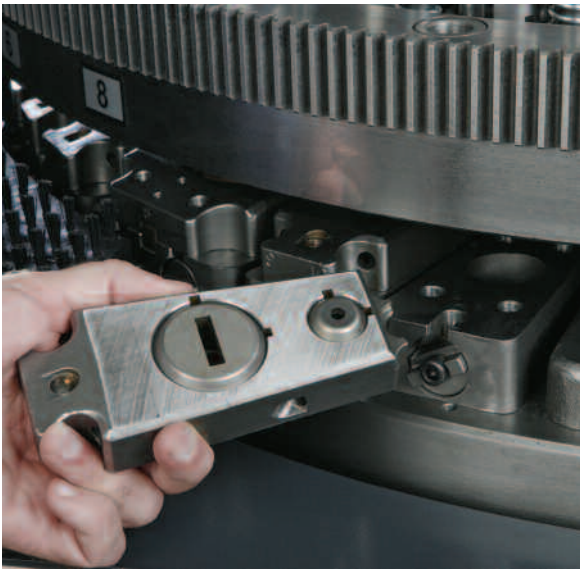


A single graphic screen provides tool images to aid in selection.

Versatile Turret Design



The large capacity turret features up to 48 stations.



Quick-change die holders reduce set-up time.

Quick Set Up

A large and versatile double-track turret provides the ultimate in flexibility and easy set up. Every station accepts shaped punches and dies, reducing set-up time. Quick change die holders further reduce set-up time, and a large tool door allows easy access to the turret for tool changeover.

Exceptional Turret Capacity

A unique mix of turret stations gives V-Series punch presses exceptional capacity. The 200 kN machines offer a 34-station configuration with four 88,9 mm auto-index stations. The 300 kN machines offer 48 stations with three 88,9 mm auto-index stations and one fixed 88,9 mm station or 114,30 mm station. The latter station is ideal for producing large louvers or using full-size parting tools.

V-Series machines also offer a full 25 mm feed clearance between the upper and lower turret. This permits the use of large forms and enhances overall forming capability. The generous feed clearance allows for the production of higher forms such as lances, louvers, embossments or card-guides.

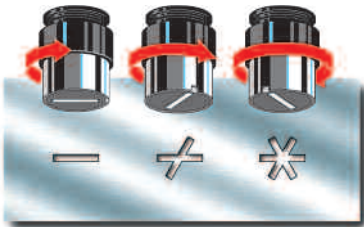
Superior Part Quality

This versatile turret is also engineered to create superior quality parts. Fully-guided, self-stripping tooling uses the punch guide to firmly press the material down on the die. The guide continues to hold the sheet against the die until the punch has retracted into the guide, preventing distortion of even the thinnest materials. The end result is flat parts with virtually burr-free holes, greater finished part accuracy and increased machine productivity.

In addition, the ability to punch at any location on the sheet using any turret station within the nominal sheet size reduces repositioning and maximizes productivity.



A fixed 114,30 mm station accommodates large parting tools, louvers or special forms.



Automatic indexing rotates both the punch and die to any angle.

Multiple Auto-Index Stations

Large 88,9 mm auto index stations allow you to punch shapes at any angle to increase flexibility and improve finished part quality. These programmable stations accept a variety of indexable Multi-Tools, further enhancing turret capacity and flexibility while reducing set-up time. Multi-Tool operates as a turret within a turret to expand the number of available tools and free up other auto-index stations. Through specially developed software,

indexable Multi-Tool allows any punch in the Multi-Tool to be rotated to any programmed angle.

Precision Alignment

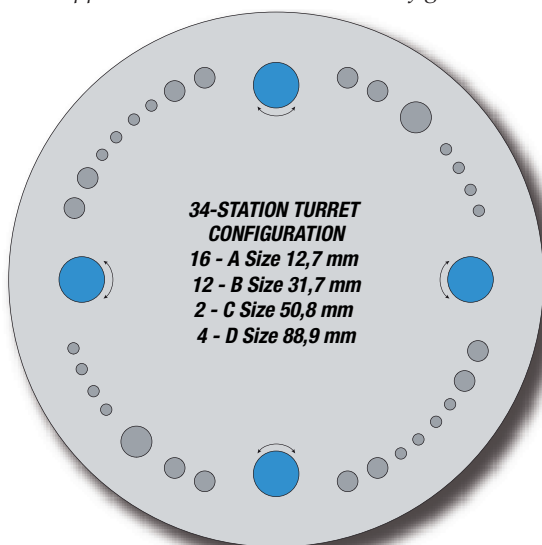
Hardened steel guide bushings ensure accurate punch and die alignment and are keyed to accept shapes in every station. Bushings can be quickly and easily replaced by the machine operator, eliminating the need for costly remachining of the turret.

- Hardened shot pins provide precise alignment of punch and die for exceptional hole quality and long tool life.
- Gear-driven turret drive design ensures fast, precise indexing.
- Bi-directional turret rotation automatically selects the shortest possible route to the next punching station for fast station-to-station positioning and increased productivity.

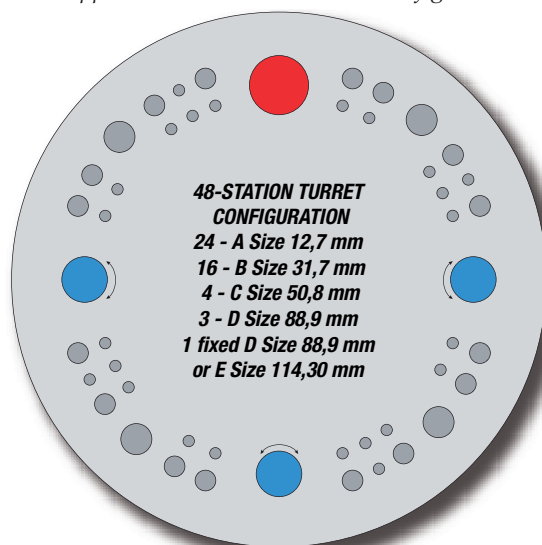


Hardened steel bushings provide effective tool guiding over an extended period of time and can be easily replaced when worn.

Strippit V-Series 200 kN Turret Configuration



Strippit V-Series 300 kN Turret Configuration



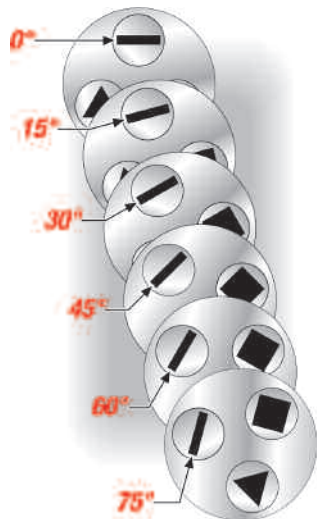
- Indicates Standard Auto-Index Station
- Indicates Optional Fixed D or Fixed E Size Station



Advanced Tooling Technology



The standard Multi-Tool indexing mechanism allows each station within the Multi-Tool to be automatically indexed.



Strippit V-Series punch presses accommodate the latest tooling technology for high-performance fabricating. These capabilities further reduce set-up time, enhance productivity and promote long life with minimal maintenance costs. Advanced tooling technology provides:

- Quick set up
- Long tool life
- Quick and precise tool length adjustment
- Low maintenance costs
- Slug control capability

Multi-Tool, a unique concept in machine tooling, dramatically boosts turret capacity. The Multi-Tool indexing mechanism, standard on all V-Series punch presses, allows each station within the Multi-Tool to be automatically indexed. This eliminates the need for specially keyed punches and dies and allows indexing of a greater range of commonly used tools. Once loaded, Multi-Tool

remains in the turret, reducing set-up time. Subsequent tool selection by program is completed in less than one second.

Form tooling increases machine versatility and reduces secondary operations. Precise programmable ram control on the hydraulic ram minimizes part springback and produces an exceptionally accurate formed part.

Wheel tooling, including rollcut and rollform capabilities, permits quick and efficient cutting and/or forming of straight or curved shapes without nibbling. V-Series punch presses also employ part marking technology for part number or sheet marking requirements and can utilize tapping tools.



Powerful CNC Control



The GE-Fanuc 180i control provides renowned reliability.

V-Series punch presses are equipped with a world-class GE-Fanuc 180i control. The control allows the machine operator to edit, input or output programs during machine operation to reduce set-up and improve productivity.

- Large 1 GB hard drive provides ample space for program storage
- Random and repeat patterns simplify programming, reduce program length
- Tool hit record tracks hits for each punch in the turret
- Network interface card allows direct network connection to offline programming systems or other computers



ONE SYSTEM FROM ART TO PART

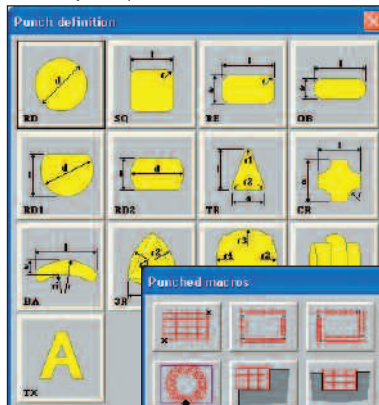
The optional CADMAN® software package offers the ideal solution to prepare offline programs for punching, laser cutting and bending. The 3D base module, running with a Windows® operating system, provides 3D design, bending information, and automatic unfolding of 3D parts. Powerful, user-friendly CAM software modules for punching, bending or laser cutting are then added to provide an effective way to program and integrate production

processes, significantly increasing the productivity and flexibility of your manufacturing processes.

The CADMAN-P 3D module for punching allows you to:

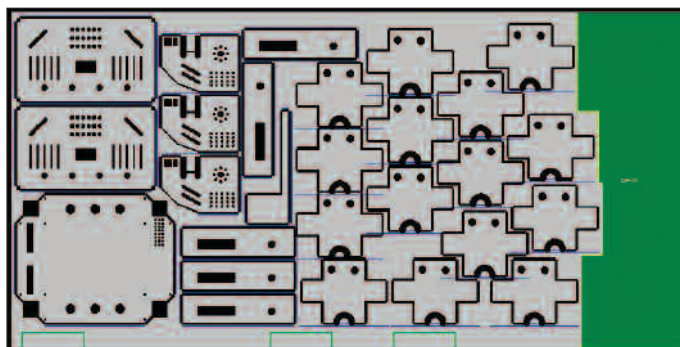
- Import DXF or AUTOCAD.DWG files
- Use interactive CAD techniques
- Generate parametric forms
- Add dimensions and text
- Nest dissimilar parts
- Automatically select tools from the tool library or from a standard turret
- Program the machine's punch and nibbling functions
- Make manual changes to any automatically generated features or sequences
- Simulate the punch sequence
- Calculate production time for the machine
- Create NC files
- Create a set-up file that guarantees the correct loading of the turret

Windows is a registered trademark of Microsoft Corporation.



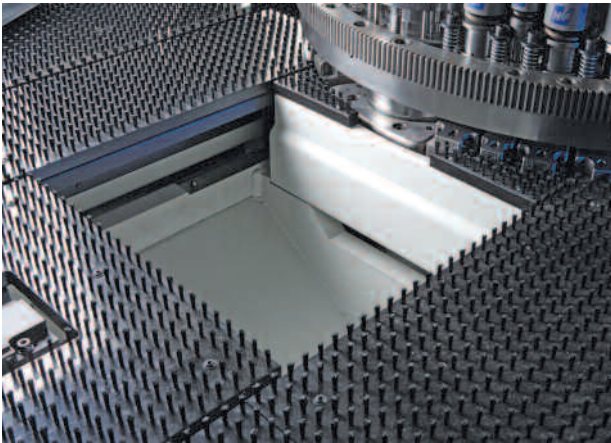
Parametric Tools

Punch Parts



Nesting

Material Handling Systems



A standard programmable parts chute measures 500 x 450 mm.

Programmable Parts Chute

A standard programmable parts chute allows individual finished parts to be evacuated through a parts chute to maximize productivity by minimizing material handling.

Optional material handling systems can be added to further enhance productivity features.

Automatic Load/Unload

A patented automatic load/unload system reduces manual worksheet handling time by as much as 80% and provides fast, efficient processing of materials up to 3,5 mm.

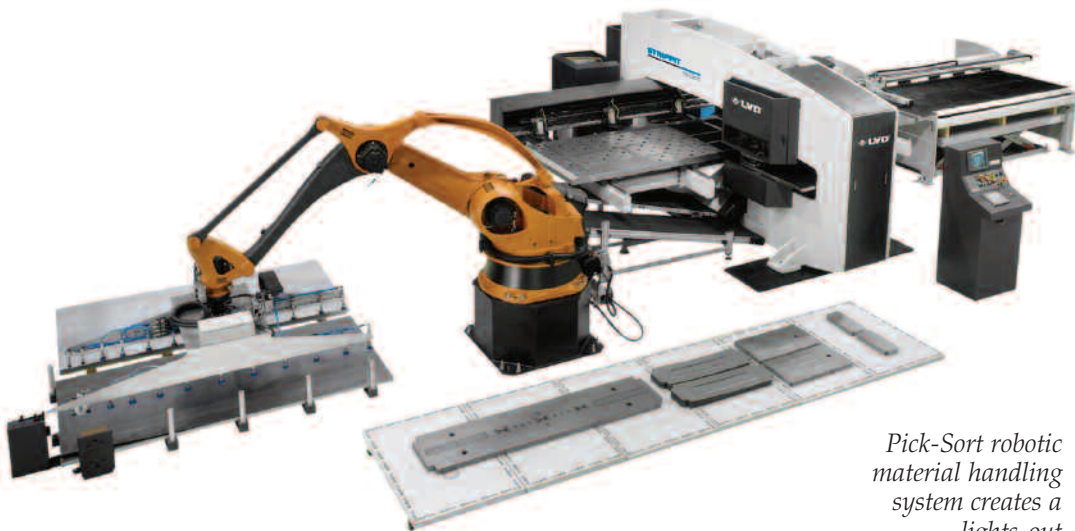
More compact than comparable material handling systems, the system features a full brush table configuration to reduce part scratching. The brush table

and hydraulic lift table work in conjunction to efficiently handle delicate part nests. A space-saving design loads and unloads material from the same side of the turret punch press. The automatic load/unload system accommodates sheets up to 1250 mm x 2500 mm for 1225 size models and up to 1524 mm x 3048 mm for 1525 size models for processing of large workpieces or nested parts.

Standard features of LVD's automatic material handling system include a double sheet detection device to prevent loading of more than one sheet at a time and a sheet separation device, which effectively separates sheets for automatic loading. The sheet separation device can be used with ferrous or nonferrous materials.

Pick-Sort Robotic System

V-Series punch presses can also be equipped with a robotic Pick-Sort material handling system. The Pick-Sort system converts the machine into a freestanding, lights-out production cell. Machine and robot are integrated to maximize punch press productivity. The robotic system loads full size sheets and automatically retrieves and stacks individual punched parts with dimensions up to 1250 x 2500 mm. An offload system removes and stacks skeletal frames or nested sheets.



Pick-Sort robotic material handling system creates a lights-out production cell.

S P E C I F I C A T I O N S

	Strippit V20-1225	Strippit V30-1225	Strippit V20-1525	Strippit V30-1525
Max. Punching Capacity	200 kN	300 kN	200 kN	300 kN
Max. Material Thickness	6,35 mm ¹	6,35 mm ¹	6,35 mm ¹	6,35 mm ¹
Punching Accuracy	± 0,1 mm	± 0,1 mm	± 0,1 mm	± 0,1 mm
Nominal Workpiece Size ² (Y,X)	1250x2500 mm	1250x2500 mm	1524x2500 mm	1524x2500 mm
Table Type Capacities				
Brush table	up to 85 kg ³	up to 85 kg ³	up to 85 kg ³	up to 85 kg ³
Stainless steel table combo Ball/Brush	up to 146 kg ⁴	up to 146 kg ⁴	up to 146 kg ⁴	up to 146 kg ⁴
Fully programmable	450x500 mm	450x500 mm	450x500 mm	450x500 mm
Work Chute (Y,X)				
Floating Clamps	3 CNC (re)locatable part pull out sensing standard	3 CNC (re)locatable part pull out sensing standard	3 CNC (re)locatable part pull out sensing standard	3 CNC (re)locatable part pull out sensing standard
Maximum Clamp Spread	2300 mm	2300 mm	2300 mm	2300 mm
Feed Clearance	25 mm	25 mm	25 mm	25 mm
Turret Configuration	34 stations	48 stations	34 stations	48 stations
Turret Layout	16 'A' - 12,7 mm	24 'A' - 12,7 mm	16 'A' - 12,7 mm	24 'A' - 12,7 mm
	12 'B' - 31,7 mm	16 'B' - 31,7 mm	12 'B' - 31,7 mm	16 'B' - 31,7 mm
	2 'C' - 50,8 mm	4 'C' - 50,8 mm	2 'C' - 50,8 mm	4 'C' - 50,8 mm
	4 'D' - 88,9 mm*	3 'D' - 88,9 mm* 1 Fixed 'D' - 88,9 mm or 'E' - 114,30 mm	4 'D' - 88,9 mm*	3 'D' - 88,9 mm* 1 Fixed 'D' - 88,9 mm or 'E' - 114,30 mm
*Auto-Index Stations	4 'D' - 88,9 mm	3 'D' - 88,9 mm	4 'D' - 88,9 mm	3 'D' - 88,9 mm
Angular Positioning Accuracy	± 0,05 degrees	± 0,05 degrees	± 0,05 degrees	± 0,05 degrees
Axis Traverse Speed	up to 128 m/min. combined	up to 128 m/min. combined	up to 128 m/min. combined	up to 128 m/min. combined
Maximum Hit Rate at 2mm working stroke⁵				
1 mm pitch	up to 1000 HPM	up to 1000 HPM	up to 1000 HPM	up to 1000 HPM
25 mm pitch	up to 425 HPM	up to 425 HPM	up to 425 HPM	up to 425 HPM
Marking Stroke (standard)	up to 1700 HPM	up to 1700 HPM	up to 1700 HPM	up to 1700 HPM

Specifications subject to change without notice

Notes

- 1 - within maximum material weight capacity
- 2 - longer workpiece sizes handled with clamp reposition
- 3 - at any speed
- 4 - at a reduced speed
- 5 - material thickness + tip recess + die penetration



A D D R E S S E S

HEADQUARTERS

LVD Company nv
Nijverheidslaan 2
B-8560 GULLEGEM
BELGIUM
Tel. + 32 56 43 05 11
Fax + 32 56 43 25 00
e-mail: info@lvd.be

Strippit Inc.
12975 Clarence Center Rd.
USA-AKRON NY 14001
UNITED STATES
Tel. + 1 716 5424511
Fax + 1 716 5425957
e-mail: info@strippit.com

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Shanghai, China