HIGHLIGHTS

Sheet metal working solutions for 4.0 factories

salvagnini

P1 ELECTRIC PANEL BENDER FOR VERSATILE PRODUCTION

- Manufactures a wide range of parts, thanks to its patented kinematics.
- Works with universal tools that require no retooling.
- Adapts automatically to changes in material and the external environment, thanks to MAC 2.0 technology.
- If equipped with the ABA blankholder tool, it produces single batches or kits, without interruption.
- Operator intervention is required only for part loading and unloading.
- Set up for connection with LINKS, Salvagnini's IoT solution.
- Ideal for industry 4.0 cells and automation, thanks to the OPS software.

MACHINE DATA	P1
Maximum bending length (in)	49.2
Maximum bending height (in)	5
Minimum thickness (gage)	27
Maximum thickness and bending angle (gage):	
Steel, UTS 59500 psi (gage)	16 (± 90°)
Stainless steel, UTS 84200 psi (gage)	18 (± 90°)
Aluminium, UTS 38500 psi (gage)	16 (± 90°)
Average consumption (kW)	3.0

P2L PANEL BENDER FOR LEAN, FLEXIBLE PRODUCTION

- Available in four models, it produces parts ranging from 85 to 98.4 inches in length and 6.5 to 8 inches in height.
- Can handle both kit and batch one production thanks to the universal tool that automatically adapts in-cycle.
- Guarantees power consumption below 4 kW (P2L-21xx) thanks to electric actuators.
- Adapts automatically to changes in the material and the external environment, thanks to MAC 2.0 technology.
- Operator intervention is required only for part loading and unloading.
- Ideal for loading/unloading solutions that are robotized (PIN3) or differentiated with an additional port (PIN2).
- Set up for connection with LINKS, Salvagnini's IoT solution.
- Ideal for industry 4.0 cells and automation, thanks to the OPS software.

MACHINE DATA	P2lean-2116	P2lean-2516	P2lean-2120	P2lean-2520
Maximum bending length (in)	85.83	98.42	85.83	98.42
Maximum bending height (in)	6.50	6.50	8	8
Maximum bending force (kN)	330	660	330	660
Maximum clamping force (kN)	530	1060	530	1060
Minimum thickness (gage)	27	25	27	25
Maximum thickness and bending angle (gage):				
Steel, UTS 59500 psi	11 (±90°)	11 (±90°)	11 (±90°)	11 (±90°)
Stainless steel, UTS 84200 psi	13 (±90°)	13 (±90°)	13 (±90°)	13 (±90°)
Aluminium, UTS 38500 psi	7 (±120°)	7 (±120°)	7 (±120°)	7 (±120°)
Average consumption (kW)	5.0	9.0	5.0	9.0

P4 AUTOMATIC PANEL BENDER WHICH CAN BE CONFIGURED FOR DYNAMIC PROCESSES

- Available in 9 models, it produces panels from 85 to 151.7 inches in length and 6.5 to 10 inches in height, for thicknesses of between 27 gage and 11 gage (steel).
- Works with universal tools that require no retooling.
- Can handle both kit, single part and batch production thanks to the universal blankholder tool that automatically adapts in-cycle.
- Guarantees maximum operator safety, as workpiece handling and bending are completely automatic.
- Adapts automatically to changes in material and the external environment, thanks to proprietary MAC 2.0 technology.
- Integrates with different semi-automatic, automatic or robotized feeding devices.
- Integrates with manual or robotized unloading devices.
- Ideal in FMS S4+P4 lines or in AJS integrated factory systems.

MACHINE DATA	P4lean-2116	P4lean-2120	P4-2225	P4lean-2516	P4lean-2520
Maximum bending length (in)	85.8	85.8	86.6	98.4	98.4
Maximum bending height (in)	6.5	7.9	10	6.5	8
Maximum bending force (kN)	330	330	440	660	660
Maximum clamping force (kN)	530	530	660	1060	1060
Minimum thickness (gage)	27	25	25	25	25
Maximum thickness and bending angle (gage):					
Steel, UTS 59500 psi	11 (±90°)	11 (±90°)	11 (± 90°)	11 (±90°)	11 (±90°)
Stainless steel, UTS 84200 psi	13 (±90°)	13 (±90°)	13 (±90°)	13 (±90°)	13 (±90°)
Aluminium, UTS 38500 psi	7 (±120°)	7 (±120°)	11 (± 90°)	7 (±120°)	7 (±120°)

MACHINE DATA	P4-3125	P4lean-3216	P4lean-3220	P4lean-3816	
Maximum bending length (in)	122	126	126	15.75-126	126-151.57
Maximum bending height (in)	10	6.5	7.9	6.5	
Maximum bending force (kN)	510	660	660	660	
Maximum clamping force (kN)	780	1060	1060	1060	
Minimum thickness (gage)	25	25	25	25	
Maximum thickness and bending angle (gage):					
Steel, UTS 59500 psi	11 (± 90°)	11 (± 90°)	11 (± 90°)	11 (± 90°)	13 (± 90°)
Stainless steel, UTS 84200 psi	13 (± 90°)	13 (± 90°)	13 (± 90°)	13 (± 90°)	13 (± 90°)
Aluminium, UTS 38500 psi	11 (± 90°)	7 (±120°)	7 (±120°)	7 (±120°)	7 (±120°)

B3 PRESS BRAKE FEATURING SCALABLE AUTOMATION FOR DYNAMIC PRODUCTION

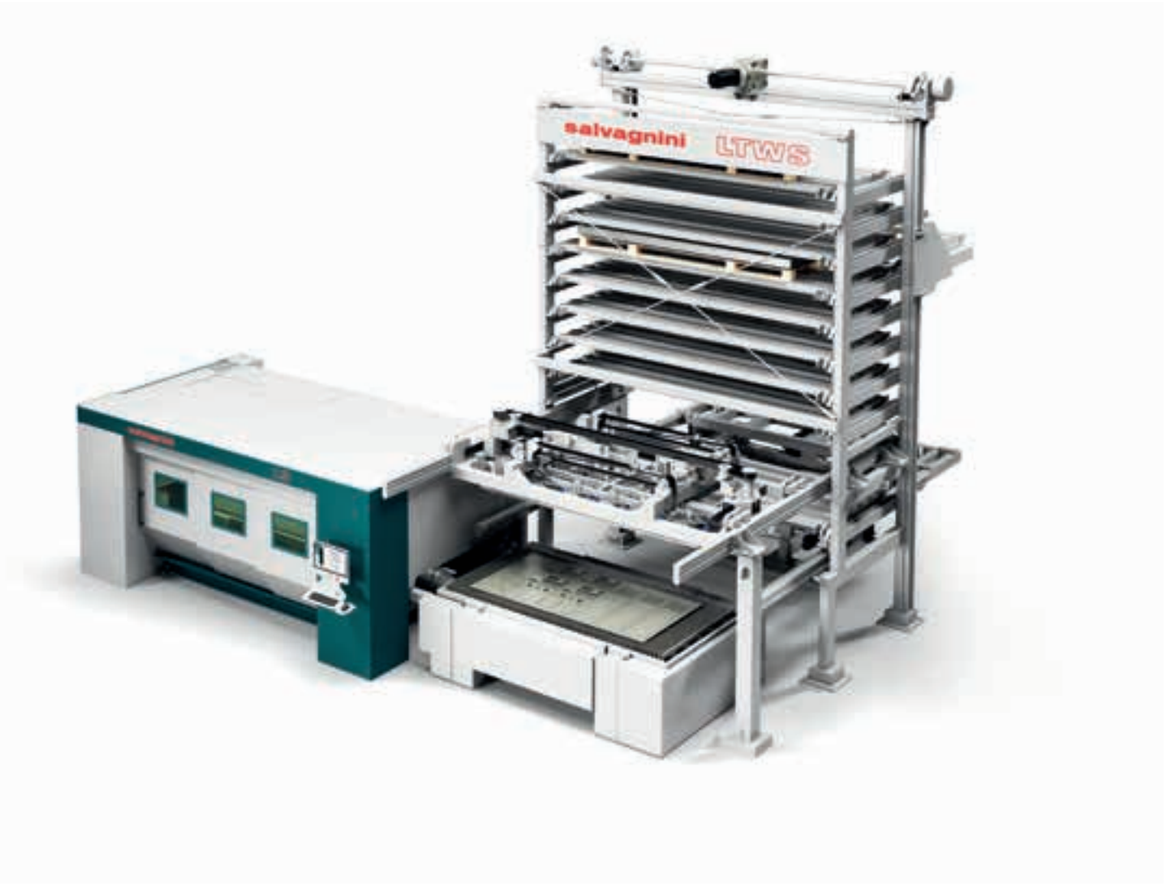
- Available in a wide range of sizes, from 79 to 236 inches, and from 60 to 400 tonnes.
- MAC 2.0 technology guarantees bending repeatability and precision.
- Reduces power consumption while maintaining high levels of productivity with the Salvagnini Power Unit.
- Allows kit and batch one production and efficient bending of parametric parts thanks to ATA and AU-TO automation.
- Automatically and quickly adjusts the length of the upper and lower tools in-cycle thanks to ATA.
- Automatically adapts the upper and lower tools in-cycle if in the AU-TO configuration.
- When combined with an anthropomorphic robot arm and automatic handling devices, it creates ROBOformER, the robotized bending cell. Managed by a single controller and controlled by a single program, it allows unsupervised production, with no need for robot teaching.
- Ideal for industry 4.0 cells and automation, thanks to the OPS software.
- Set up for connection with LINKS, Salvagnini's IoT solution.

MACHINE DATA	60/2000	100/3000	135/3000	135/4250	170/3000	170/4250	170/4250XL
Maximum bending force (US tons)	66	110	149	110	187	187	187
Maximum speed (ipm)	590,6	590,6	590,6	590,6	590,6	590,6	590,6

MACHINE DATA	220/3000	220/4250	220/5100	320/3000	320/4250	320/5100	400/4250
Maximum bending force (US tons)	242	242	242	352	352	352	441
Maximum speed (ipm)	590,6	590,6	590,6	590,6	590,6	590,6	590,6

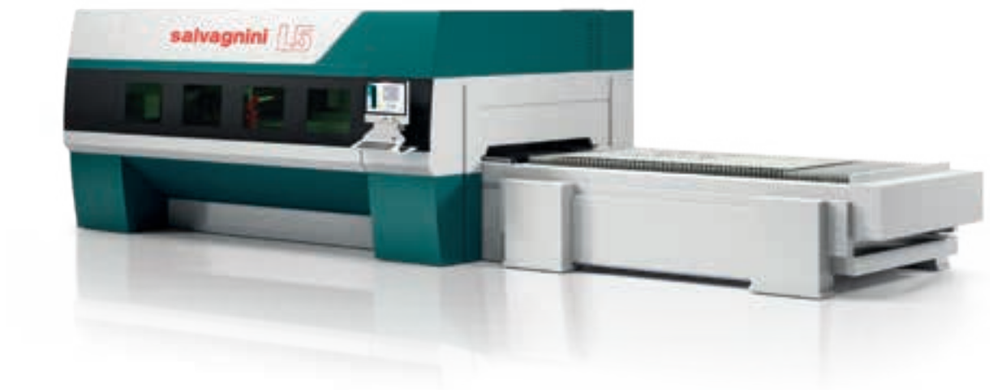
L3 L5 MODULAR AUTOMATION LASER CUTTING FOR FLEXIBLE PROCESSES

- Available in 4 sizes, for processing sheets from 118 to 236 inches in length and 59 to 79 inches in width.
- Feature an airplane-type structure to guarantee processing precision and stability.
- Offer easy access to the worktable for simplified pick-up of parts and facilitated maintenance.
- Allow full control of processing and automation thanks to the central position of the control console.
- Equipped with a single optics head offering high-quality cuts across the entire range of thicknesses.
- Automatically adjusts the cutting parameters on the basis of the trajectories (Tradjust).
- Suitable for unsupervised operation, since the fast pallet changer always moves the sheet to be cut above the cut one.
- Set up for cutting with nitrogen, oxygen or compressed air.
- Offer different process control solutions:
  - APC2 for control of piercing, cutting loss and automatic focus search.
  - AVS for centering on previously processed sheets.
  - SVS for recovery and reuse of scrap.
- Integrated with numerous manual and automatic feeding and unloading devices, including modular stores ideal for unsupervised processing.
- Ideal for industry 4.0 cells and automation, thanks to the OPS software.
- Set up for connection with LINKS, Salvagnini's IoT solution.



MACHINE DATA	L3			
Working range	**L3-30**	**L3-40**	**L3-4020**	**L3-6020**
X Y worktable (in)	120x60	160x60	160x80	240x80

TECHNICAL DATA	L3				
Fiber laser source (W)	2000 W	3000 W	4000 W	6000 W (L)	6000 W
Cutting capacity (thicknesses) (gage):					
Steel (S185JR,S235JR, RAEX 250 C LASER)	24 - 19/32"	24 - 3/4"	24 - 3/4"	24 - 3/4"	24 - 1"
Stainless steel (AISI 304, X5CrNi18-10 1.4301)	24 - 3/8"	24 - 7/16"	24 - 19/32"	24 - 3/4"	24 - 3/4"
Aluminium (Al 99.5 EN AW 1050A)	24 - 5/16"	24 - 3/8"	24 - 19/32"	24 - 3/4"	24 - 3/4"
Copper (Cu-ETP CW004A H040 EN1652)	24 - 3/16"	24 - 5/16"	24 - 5/16"	24 - 5/16"	24 - 3/8"
Brass (CuZn37 CW508L H055 EN1652)	24 - 3/16"	24 - 7/32"	24 - 5/16"	24 - 5/16"	24 - 5/16"
Maximum power consumption (kW)	16	18	21	28	28

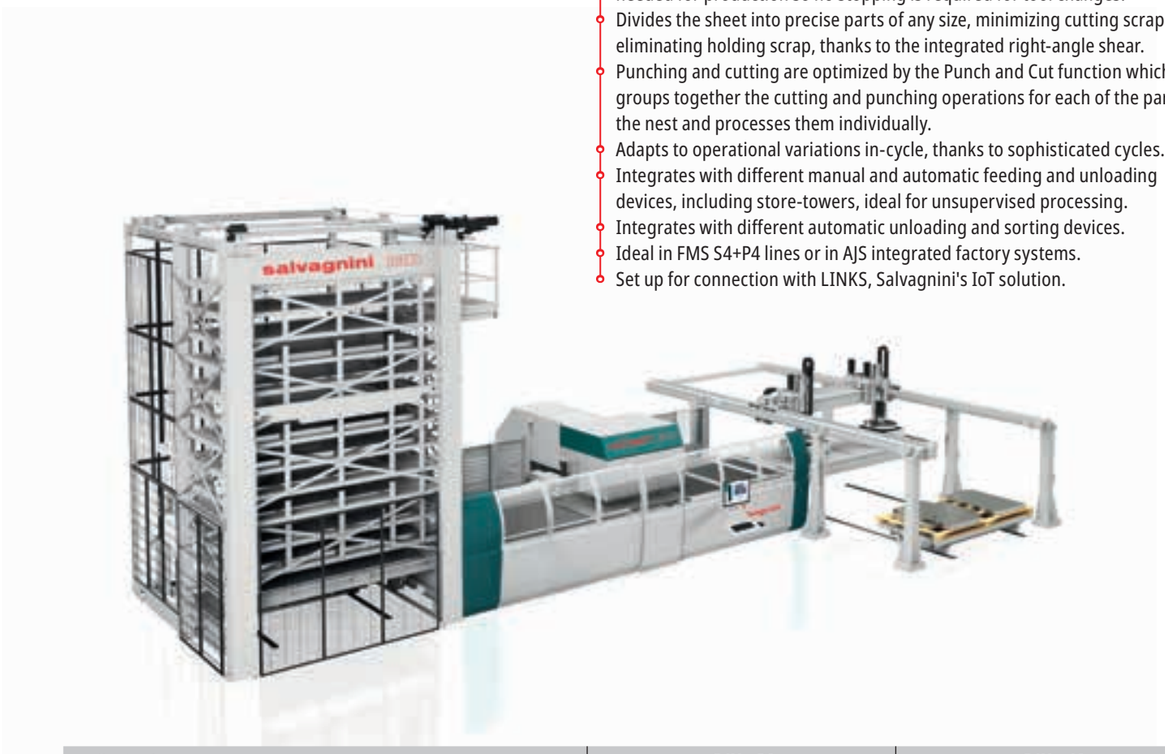


MACHINE DATA	L5	
Working range	**L5-30**	**L5-40**
X Y worktable (in)	120x60	160x60

TECHNICAL DATA	L5			
Fiber laser source (W)	2000 W	3000 W	4000 W	6000 W (L)
Cutting capacity (thicknesses) (gage):				
Steel (S185JR,S235JR, RAEX 250 C LASER)	24 - 19/32"	24 - 3/4"	24 - 3/4"	24 - 3/4"
Stainless steel (AISI 304, X5CrNi18-10 1.4301)	24 - 3/8"	24 - 7/16"	24 - 19/32"	24 - 3/4"
Aluminium (Al 99.5 EN AW 1050A)	24 - 5/16"	24 - 3/8"	24 - 19/32"	24 - 3/4"
Copper (Cu-ETP CW004A H040 EN1652)	24 - 3/16"	24 - 5/16"	24 - 5/16"	24 - 5/16"
Brass (CuZn37 CW508L H055 EN1652)	24 - 3/16"	24 - 7/32"	24 - 5/16"	24 - 5/16"
Maximum power consumption (kW)	16	18	21	28

S4Xe PUNCHING-SHEARING CENTER

- Punches and cuts automatically, loading, unloading, stacking, separating and sorting in masked time.
- Equipped with an operating head and a die-structure containing all the tools needed for production so no stopping is required for tool changes.
- Divides the sheet into precise parts of any size, minimizing cutting scrap and eliminating holding scrap, thanks to the integrated right-angle shear.
- Punching and cutting are optimized by the Punch and Cut function which groups together the cutting and punching operations for each of the parts in the nest and processes them individually.
- Adapts to operational variations in-cycle, thanks to sophisticated cycles.
- Integrates with different manual and automatic feeding and unloading devices, including store-towers, ideal for unsupervised processing.
- Integrates with different automatic unloading and sorting devices.
- Ideal in FMS S4+P4 lines or in AJS integrated factory systems.
- Set up for connection with LINKS, Salvagnini's IoT solution.



MACHINE DATA	S4Xe.30	S4Xe.40
Technical specifications		
Maximum sheet dimensions (in)	120” x 65”	160” x 65”
Maximum sheet diagonal (in)	137”	173”
Minimum sheet dimensions (in)	15” x 12”	
Punching		
Punching tool change time (s)	0 (each tool is always ready for use)	
Possibility of activating two or more tools simultaneously	yes	
Maximum material thickness (in) / (gage):		
Aluminium, UTS 38500 psi	0.20” / 6	
Steel, UTS 59500 psi	0.14” / 10	
Stainless steel, UTS 87000 psi	0.08” / 14	
Minimum material thickness (gage)	96	
Shearing		
Technology	simultaneous or independent X- and Y-axis cutting	
Blade clearance adjustment	automatic	
Length of shear blades X x Y (in)	19.5” x 19.5”	
Maximum material thickness (in) / (gage):		
Aluminium, UTS 38500 psi	0.20” / 6	
Steel, UTS 59500 psi	0.14” / 10	
Stainless steel, UTS 87000 psi	0.08” / 14	

S1 MECHATRONIC PUNCHING MACHINE

- Equipped with a multi-press head with advanced hybrid technology.
- Reduces power consumption by 20% compared to other electric solutions.
- Simultaneously manages up to 41 standard thick turret tools with controlled descent.
- Sheet movement via the manipulator with two independent carriages. The variable set-up with extended grippers optimizes the paths and allows all parts of the sheet to be reached.
- Provides maximum freedom in terms of cutting geometry along with effective final detachment of the part, when equipped with a laser head.
- Integrates with different feeding devices: manual, from a pack via a suction cup device or with a single-sheet or pack store-tower.
- Unloading can be manual, automatic with the unloader on a dual-position table or by an MCU Cartesian sorting device.

MACHINE DATA	S1.30	S1.40
Technical specifications		
Maximum sheet dimensions (in)	120” x 60”	160” x 60”
Maximum sheet diagonal (in)	137”	171”
Minimum sheet dimensions (in)	15” x 12”	
Punching		
Maximum material thickness (mm):		
Steel, UTS (410 N/mm^2) (gauge)	6	
Stainless steel, UTS (580 N/mm^2) (gauge)	6	
Aluminium, UTS (265 N/mm^2) (gauge)	6	
Minimum material thickness (gage)	96	
Laser		
Technology	fiber	
Source	fiber	
Max power (W)	2000 - 3000	
Max thickness of sheet (gauge)	6	
Assist gas	Nitrogen, compressed air	

Flexcell

THE CELL DESIGNED FOR 4.0 FACTORIES

- FlexCell is a smart combination of stand-alone machines that communicate with the proprietary process software.
- Satisfies all bending requirements by combining panel bender automation and productivity with press-brake flexibility.
- Integrates with different automatic handling devices.
- Ideal for industry 4.0 automation.

FMS S4+P4

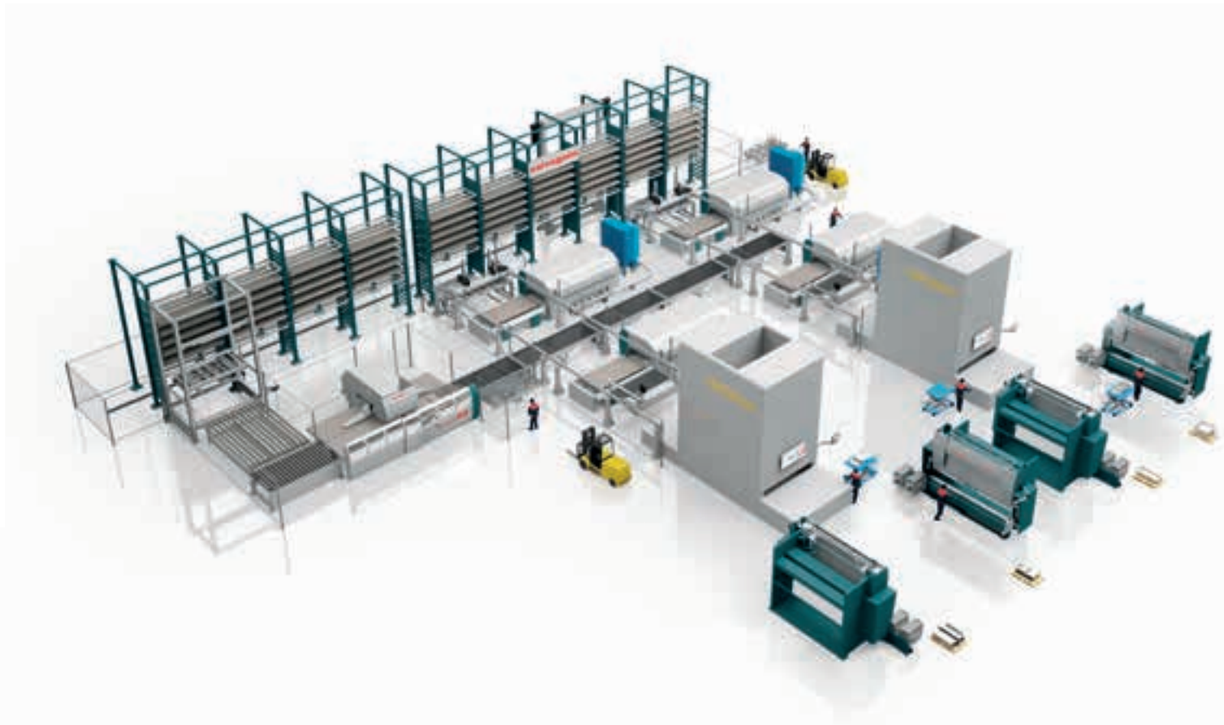
THE MOST EFFICIENT SYSTEM OF SHEET METAL PROCESSING

- Punches, cuts and bends the sheet metal in a completely automatic manner, without intermediate handling.
- Guarantees high productivity and the possibility of running kit or batch-one production thanks to set-ups in masked time.
- Integrates with manual or automated intelligent feeding and unloading solutions, in order to ensure that the parts produced are both cost-effective and high quality.

AJS™

AUTOMATED JOB SHOP THE PRODUCTION SYSTEM FOR LEAN PRODUCTION

- Combines different production technologies into a multi-process solution.
- The OPS software schedules, balances and optimizes factory production flows in a completely automatic and flexible manner.



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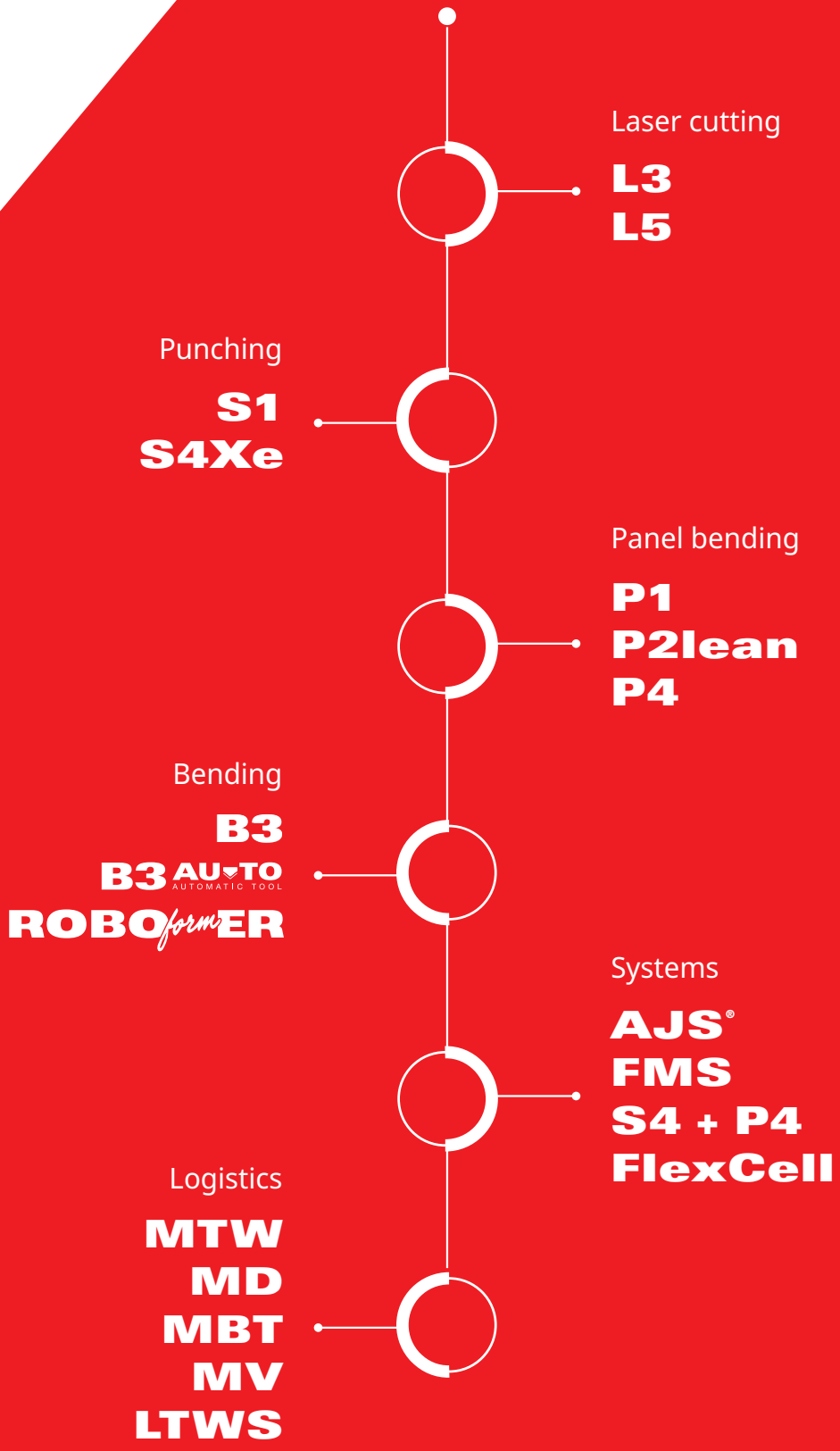

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