



The Bend
The Combi
The Laser
The Press
The Punch
The Shear
The System
The Software

The Combi

Accelerated manufacturing
with integrated punching and laser cutting

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Next level. Integration.

Today's volatile market demands that companies be competitive, accurate and reactive. Prima Power products continue to evolve, bringing efficiency to a whole new level. More productive machines, new automation solutions, and easy-to-use option suites are designed to meet the customer's real needs.

To provide the best Prima Power technology, our team of experts will always be available to listen, assist and advise.

What can be found in this brochure

Integrated punch-laser machines

for specialized and multi-purpose productions.

Suites of options designed to achieve the best performances depending on the customer's needs.

Wide range of automation solutions to manage the whole production cycle.

Choosing an innovation leader



Prima Power is a leading specialist in machines and systems for sheet metal working. Our offering in this field is one of the widest and covers all applications: laser processing, punching, shearing, bending and automation. The Group employs over 1,800 people and has manufacturing sites in Italy, Finland, China and the US, as well as a worldwide commercial and after-sales presence.

The RANGE

Thanks to the modularity of our products, we are able to offer manufacturing solutions ranging from single stand-alone machines up to the complete system for the management of work phases, flow of information and material handling. The integration with other technologies of sheet metal processing included in our product range, allows us to offer our customers the most complete production solutions possible.

THE BEND

Wide range of solutions for bending and automation.

THE COMBI

Integrated solutions for punching & laser cutting.

THE LASER

Laser machines and systems for 2D and 3D cutting, welding and drilling.

THE PRESS

Fast, accurate and efficient servo-electric press brakes.

THE PUNCH

State-of-the art, versatile solutions for servo-electric punching.

THE SHEAR

Integrated systems for punching & shearing – highly productive with optimal sheet utilization.

THE SYSTEM

Full and modular range of solutions for the management of the whole working process.

THE SOFTWARE

Prima Power software solutions to maximize throughput.

More than the sum of its parts


$$1+1 > 2$$

***Punching + Laser cutting
= Superior manufacturing economy***

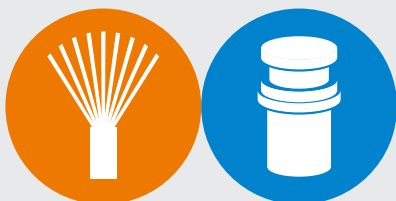
The punching and laser cutting combi machines were introduced to the Prima Power product family in 1987. It was noticed that combining different work stages accelerated the manufacture of the final product and reduced the production costs.

A modern combi machine uses numerically controlled, servo-electric axes, which provides outstanding energy efficiency, low maintenance requirement and a high speed of operation. The cornerstones of its productivity include large tool capacity, a wide range of special tools available and easy and fast setup change.

As the best laser power source for the combi machine, fiber laser has a very high efficiency to cut material up to 8 mm thickness.

All this capacity and efficiency is controlled with Prima Power's own software.

**Over 30 years of
integrated punching
and laser cutting**



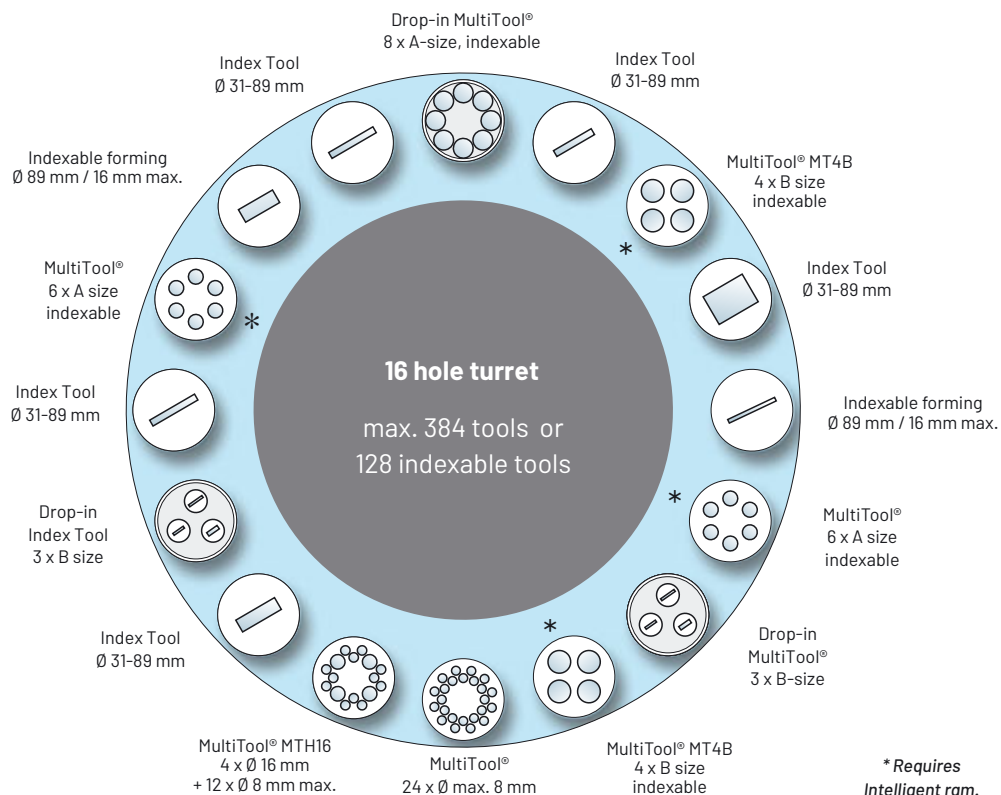
Unbeatable tooling concept



CUSTOMIZED TURRET DESIGN

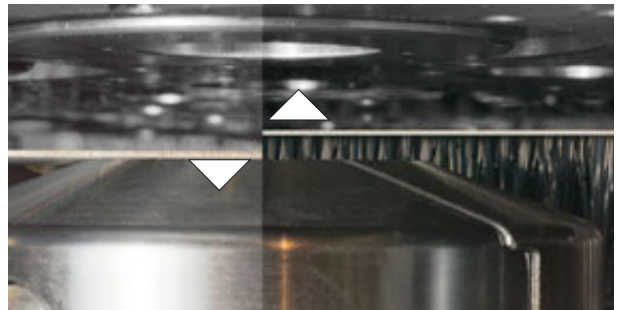
Tooling can be flexibly selected as required by the application. Up to 384 standard or 128 index tools can be simultaneously available in the turret for active use. Turrets with 16 and 20 holes are available. The turrets are also compatible with Amada® tools.

The set-up of all punching, forming and special tools is easy using the graphical tool library of the Tulus® operating system. Automatic tool lubrication system and vacuum assisted scrap removal are available as options.



SCRATCH FREE

Brushes also in front and inside of the turret lift the sheet during movement preventing effectively the scratching of sensitive materials. The movement is activated by the program when needed.



FORMING, TAPPING, MARKING - MORE VALUE TO PARTS

Prima Power's servo-electric Ecopunch® technology offers several highly productive tools in a single machine.



Watch
the video



The high-precision, servo-electric, indexable up-forming cylinder provides 200 kN power for fast forming of even high and complicated forms and continuous roll forming.



Automatic tapping can be achieved with multithread tapping tool. Watch the video with the QR code.



Prima Power options include part tracing systems from labelling to laser marking.



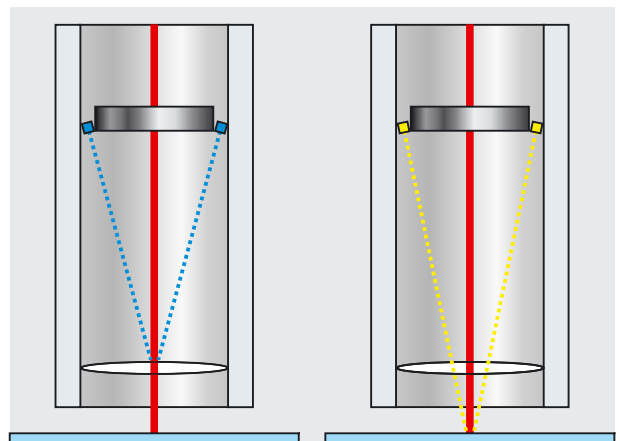
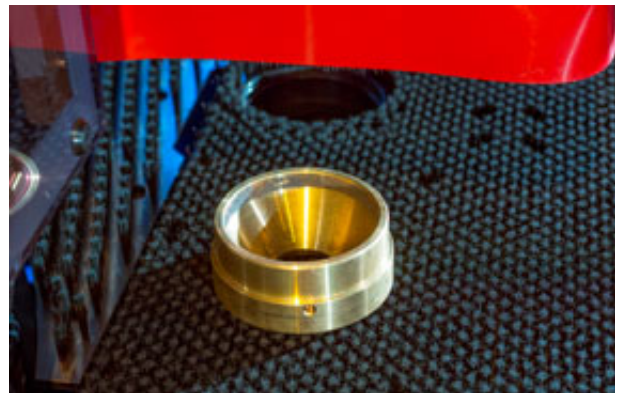
Reliable laser cutting

The optimized cutting head, collimator, delivery fibre and cutting parameters guarantee the highest cutting quality and speed in the market for the Prima Power combi machine. The high-quality and powerful fibre laser is available with Prima Power CF and IPG YLS resonators.

Combi machines include many safety systems to improve cutting performance and reliability. Lens protection window LPW prevents dust and spots on the lens. Laser process monitor LPM follows the cutting process and restarts it if necessary. Lens condition sensor LCS monitors lens condition and informs the operator when lens requires changing.

For the laser-cut parts drop doors are provided as standard. From the drop door, the parts are transferred by conveyor to the side of the machine to be unloaded manually or forwarded with different conveyor and sorting solutions.

Brushes on the work chute top prevent scratches.



Lens condition
sensor LCS

Laser process
monitor LPM

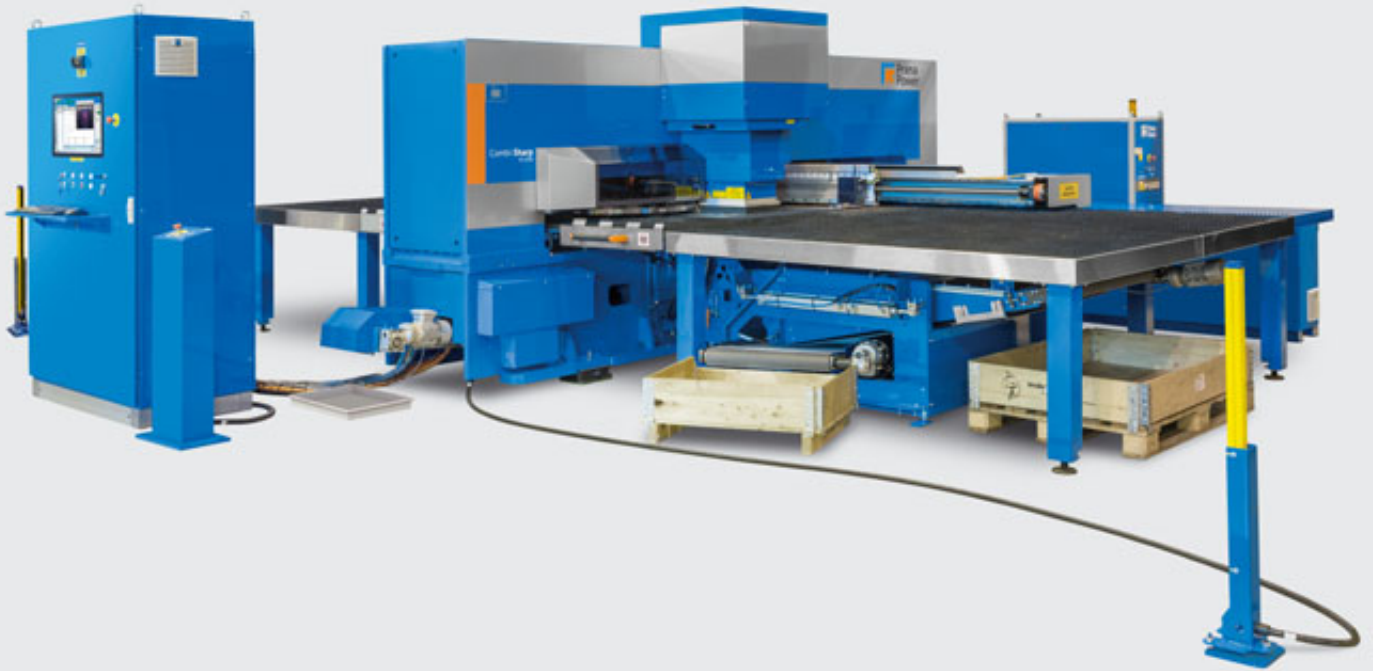


Cutting performance

Prima Power	CF1000	CF3000	CF4000
Mild steel, mm	8	8	8
Stainless steel, mm	4	6	8
Aluminium, mm	3	6	8
Brass, mm	2	6	8
Copper, mm	2	6	8

IPG	YLS4000
Mild steel, mm	8
Stainless steel, mm	8
Aluminium, mm	8
Brass, mm	8
Copper, mm	8

Combi Sharp™



SUPERIOR MANUFACTURING ECONOMY

Prima Power's modular approach to flexible manufacturing gave birth to a whole new fabrication concept. Servo-electric Combi Sharp™ is a compact punching and fiber laser cutting cell with improved accessibility. 1 kW resonator and large tooling capacity offer superior manufacturing economy when options including automated material handling take it even further.



NO TOOL SETUPS

Customized turret design allows up to 384 standard or 128 index tools for active use.



COMPACT FIBER LASER

1 kW fiber laser with integrated cooler offers economical manufacturing capacity for large range of sheet metal products.



ACCESSIBLE

New safety system allows easier material handling and faster work cycles with the machine when operated manually.



COMPACT LAYOUT

Small floor space needed.



MODULAR TECHNOLOGY

Manufacturing cell can be equipped with automation solutions to achieve unattended production.



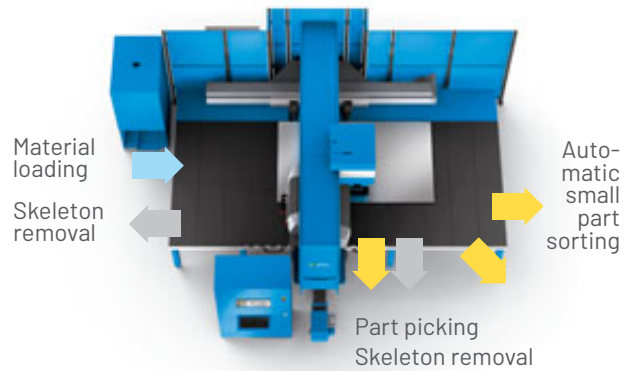
SCRATCH FREE

Vertically moving brushes prevent the scratching of sensitive materials.

EASY SHEET LOADING AND UNLOADING

Manual loading and unloading is facilitated by a movable table top. Four loading pins for different sheet sizes ensure that even the smallest sheets can be handled close to the operator. The loading of heavy sheets is made easy with vertically moving sheet supports.

Machine is equipped with three automatic clamps. Clamp position is programmable for maximum sheet utilization.



Due to compact safety equipment the machine is easy to access. The material flow can be automated for more productive manufacturing.



Larger sheets are positioned against the first and second loading pin.



Smaller sheets are positioned against the third and fourth loading pin.



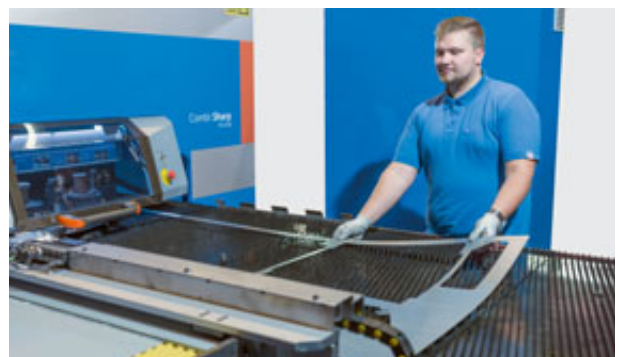
Punched parts up to 500 x 500 mm are dropped through the door in front of the turret for separate sorting.



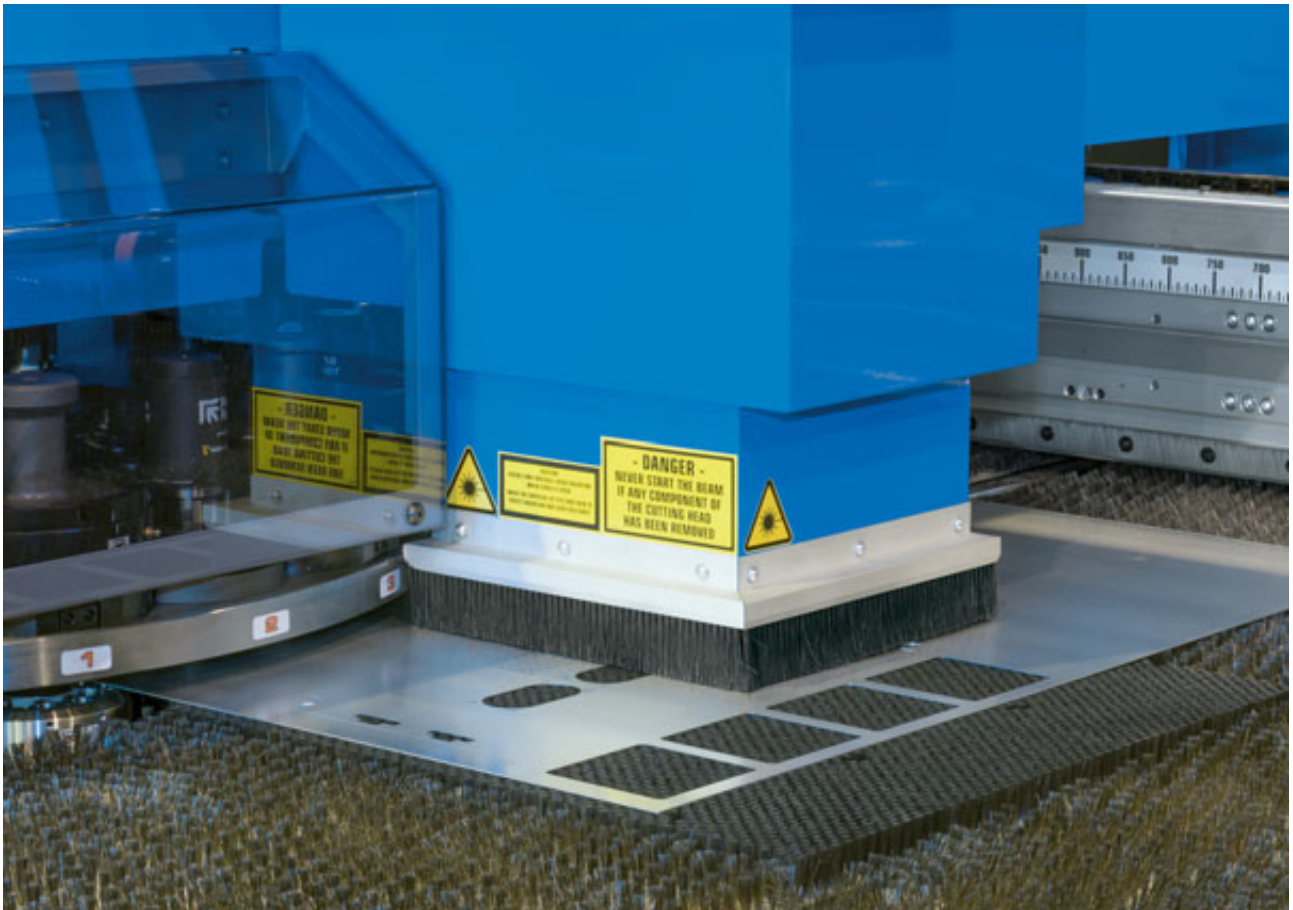
Laser cut parts up to 500 x 500 mm are dropped through the door in the table onto conveyor below.



Parts over 500 x 500 mm are picked from the table.



Skeletons can be removed from either side of the machine.



MACHINE FEATURES, COMBI SHARP™

- 17 ton punching force as standard, 20 ton and 23 ton upgrade available as option.
- Up to 250 tools can be simultaneously available in the turret for active use.
Turret is compatible with Amada® tools.
- Compact 1 kW Prima Power fiber laser with integrated cooler.
Optional 3 kW resonator available with separate coolers.
- Two sheet clamps with central locking and foot pedal.
Optional third clamp available for better grip and support for larger sheets.
- Prima Power CNC control: PC based TwinCat motion control with Rexroth IndraDrive motors & drives
Touch screen operated graphical user interface; Tulus® Lite, including one year maintenance licence.

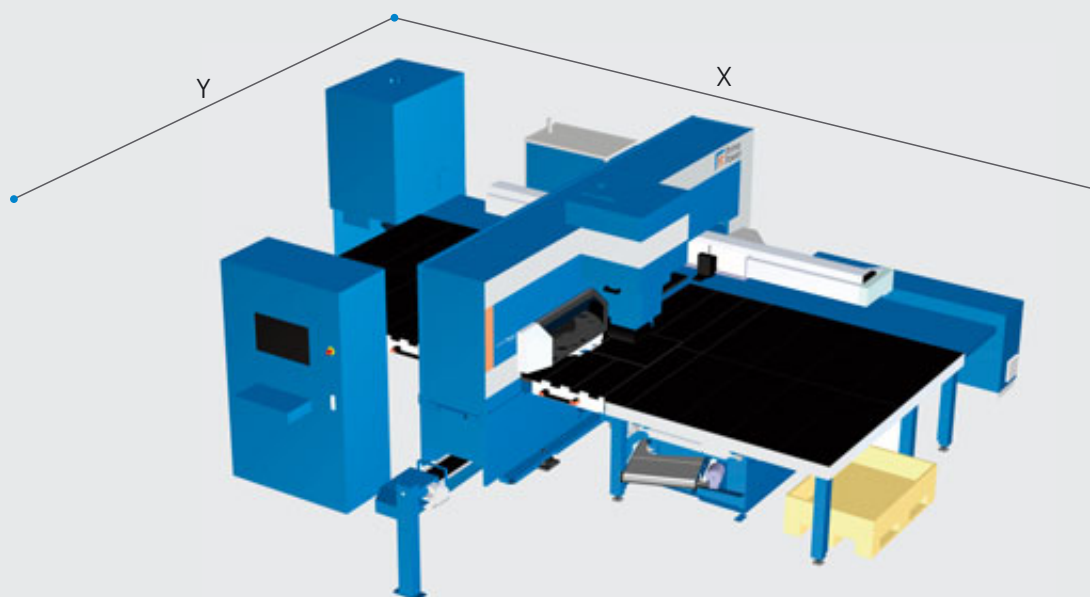
Technical specifications

Combi Sharp™

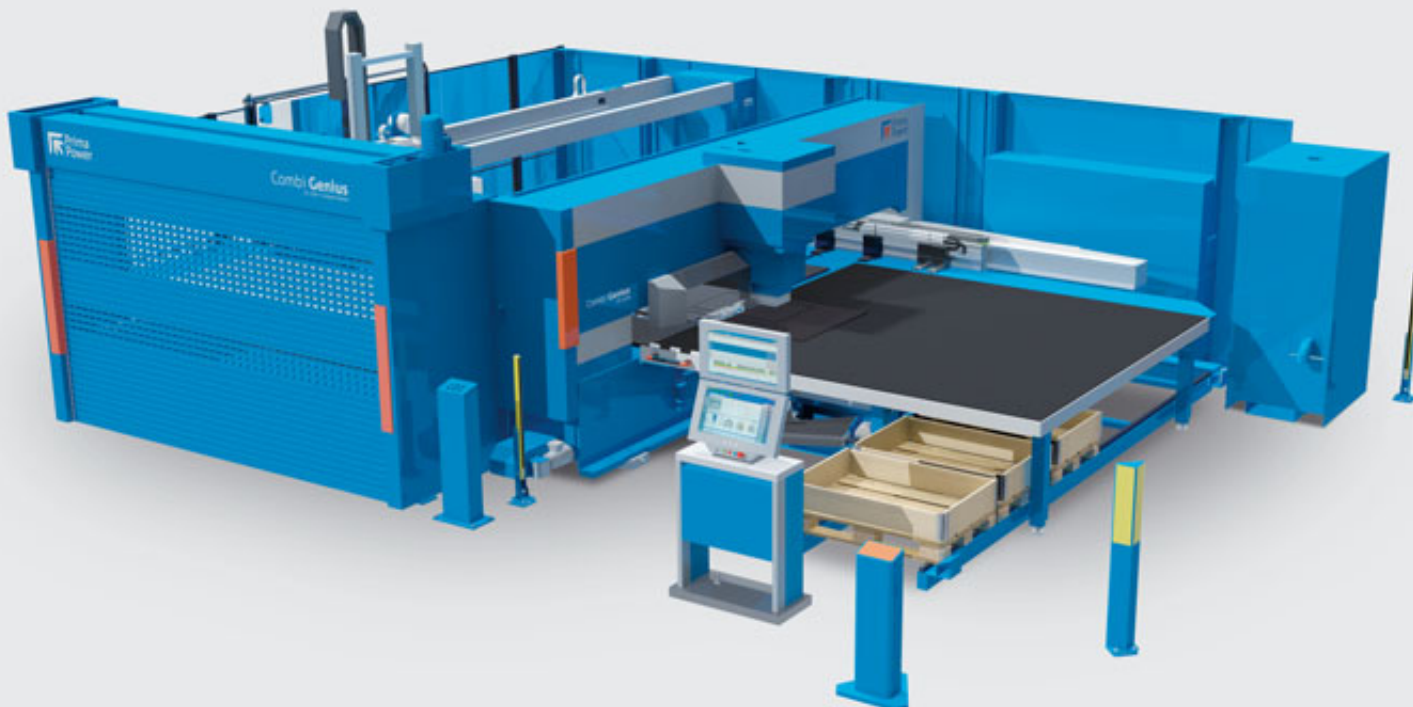
Model	CS1225
Max. sheet size, mm	2,500 mm x 1,250 mm
Combined working area	1,930 x 1,270
Punching force, kN	170 (optional 200 or 230)
Punching speed, 1/min	700
Axis positioning speed m/min	108
Index rotation speed r/min	166
Standard turret	20 stations: 250 tools (4 index, 35 tools)
Fiber laser power, kW	1
Max. sheet thickness, mm; punch and laser	8 (Aluminium, Mild steel, Stainless steel)
Max. sheet weight, kg	200
Average power consumption, kW	3.2 (punch) 3.5 (laser) = 6.7 (total)

Approximate main dimensions without safety systems

CS 1225: Y 6.0 m, X 6.9 m



Combi Genius®



MODULARITY TAKEN TO THE NEXT LEVEL

When the Genius series turret punch presses were designed Prima Power was listening very carefully the customers' experiences and wishes. As a result, a compact machine with a small footprint offering productivity, operation convenience and compatibility with a number of automation solutions was achieved. A remarkable improvement was the modular construction of the machine itself. With few changes in the configuration the machine could specialize in many manufacturing needs. The high-quality and powerful fibre laser is available with 3 kW or 4 kW resonator.



ALL THIS AND MORE

Combi Genius® has all the same features as the Combi Sharp™ plus additional intelligence and modularity:



INTELLIGENT RAM

More tools in turret and shorter tool change times

TWO PERFORMANCE LEVELS



PURE

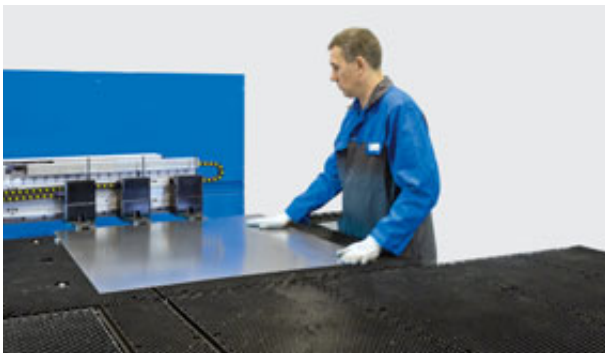
meets all the targets set for an attractively priced, yet efficient production machine



DYNAMIC

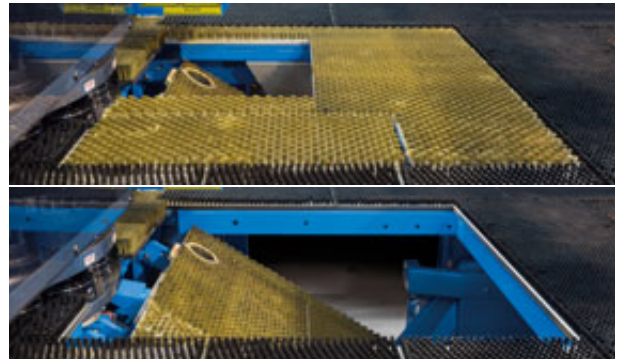
offers the best productivity and performance in the market

MANUAL LOADING AND UNLOADING



Sheets can be loaded from both sides of the machine. Moving tables allow loading without stretching and lifting balls support the sheet while clamping.

DROP DOORS FOR PART SORTING



Drop doors next to punching and laser cutting allow automatic part sorting.

Maximum sizes to drop from punching is 500 x 500 mm. For the laser-cut parts, two drop doors are provided; 300 x 400 mm for quicker sorting and 800 x 800 mm for larger parts.

INTELLIGENT RAM

Intelligent ram is an option for Genius series punching to shorten tool change time and increase the number of tools in turret and especially that of index tools.

Intelligent ram includes a rotating ram head, which enables old Multi-Tool® types to be used as indexable. Also new Multi-Tool® innovations such as 4A and 4B can be used with the Intelligent ram.

Watch the video





MACHINE FEATURES, COMBI GENIUS®

- 23 ton and 30 ton punching force as standard, depending on selected performance.
- Up to 384 standard or 128 index tools can be simultaneously available in the turret for active use. Turret is compatible with Amada® tools.
- 3 or 4 kW Prima Power fiber laser resonator with external coolers.
- Two sheet clamps with central locking and foot pedal.
Optional third clamp available for better grip and support for larger sheets.
- Two drop doors and conveyor for laser cut parts, conveyor for laser cut scrap.
- Prima Power CNC control: PC based TwinCat motion control with Rexroth IndraDrive motors & drives. Touch screen operated graphical user interface; Tulus® Lite, including one year maintenance licence.

Technical specifications

Combi Genius®

Model	CG1225	CG1530	CG1540
Max. sheet size, mm	2,500 x 1,250	3,000 x 1,500	4,300 x 1,500 with repositioning
Combined working area, mm	1,930 x 1,270	2,500 x 1,565	2,500 x 1,565
X movement, mm	2,500	3,000	3,000
Table height, mm	935	935 / 1,100	1,100

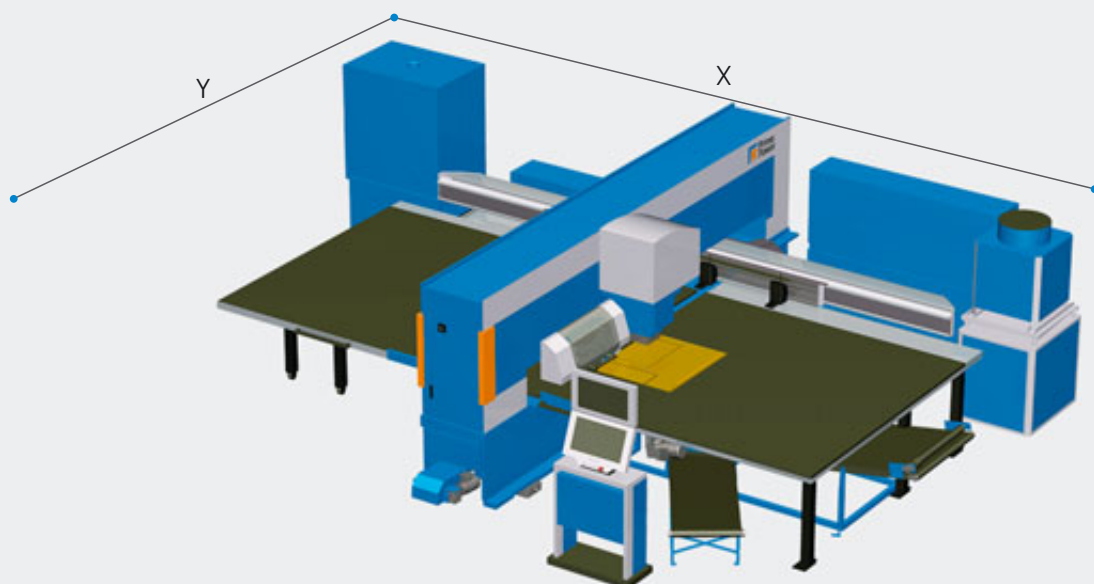
Performance level	Pure	Dynamic
Punching force, kN	230	300
Punching speed, 1/min	700	1.000
Axis positioning speed, m/min	X25: 108; X30: 127	X25: 127; X30: 150
Index rotation speed, r/min	180	250
Max. no. of tools / index tools	16 hole turret 384/128, 20 hole turret 280/80	
Laser power, kW	3 or 4	
Max. sheet thickness, punch and laser, mm	8 (Aluminium, Mild steel, Stainless steel)	
Max. sheet weight, kg	250	
Average power consumption, kW	11	

Approximate main dimensions without safety systems

CG 1225: Y 6.0 m, X 8.0 m

CG 1530: Y 6.0 m, X 8.6 m

CG 1540: Y 6.0 m, X 9.4 m



Around-the-clock production

Prima Power machines are highly reliable and are used worldwide in the harshest production environments and for the most demanding manufacturing schedules.

This makes them particularly suitable for 24/7 operation.

Compact Express

Fully automated device for sheet loading and unloading

Sheet holder for scratch-free unloading

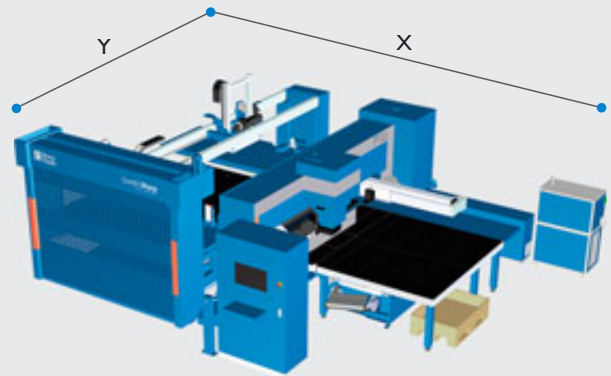
Machine can be operated with simultaneous manual and automated material handling

Sheets can be added and removed while the machine operates

Remote controlled safety door for easy material handling with a forklift

Compact size, does not increase required floor space much more from that of the machine

Two models for 2.5 m and 3 m sheets

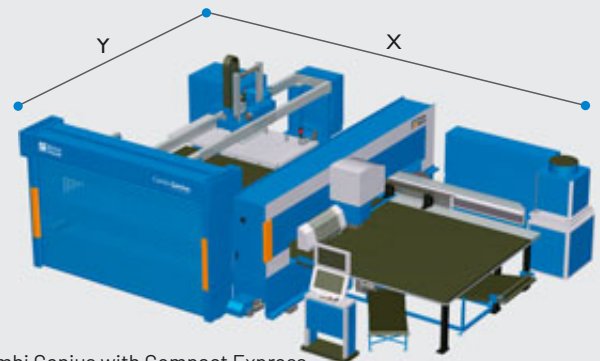


Combi Sharp with Compact Express
CG 1225: Y 6.4 m, X 6.9 m

UDC, unloading device for sheets

Removes skeletons with micro-jointed parts from the machine table

Can be used with the machine or integrated to Compact Express



Combi Genius with Compact Express
CG 1225: Y 6.2 m, X 7.8 m
CG 1530: Y 6.8 m, X 9.0 m

LST, loading and stacking system for automated material handling

Compact high-performance automatic loading and stacking robot

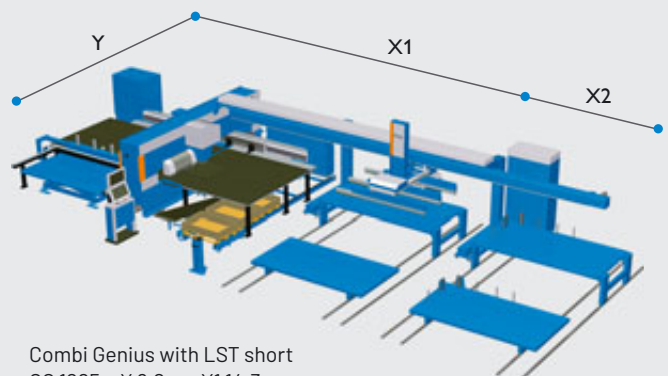
LST loads the sheets into the machine, picks the parts and sorts them to stacks

Parts are picked up in front of the turret or from the cutting head by a pneumatic gripper

Skeletons are removed by the unloading device UDC integrated to machine table

Two main frame lengths with different number of table or wagon positions

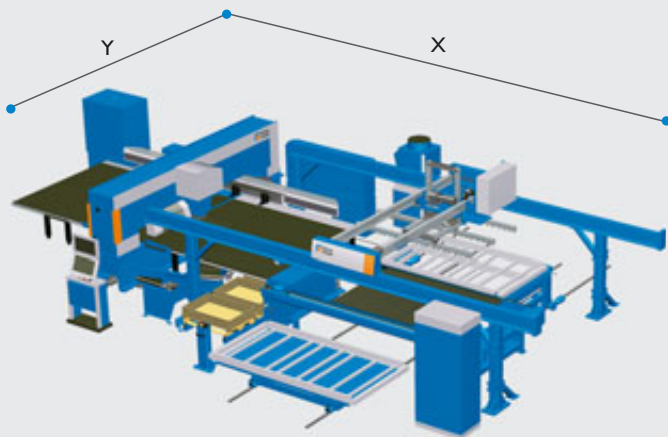
Fully compatible with all our other automation systems



Combi Genius with LST short
CG 1225: Y 6.0 m, X1 14.3 m
CG 1530: Y 6.5 m, X1 15.5 m

Combi Genius with LST long
CG 1225: Y 6.0 m, X2 16.8 m
CG 1530: Y 6.5 m, X2 17.4 m

Note: machine dimensions here are without safety systems. Systems depend on customer's factory layout and may increase required space.



Combi Genius with LSR
CG 1530: Y 9.2 m, X 14.6 m
CG 1540: Y 9.2 m, X 18.5 m

LSR, loading and stacking robot for automatic material loading and part sorting

Loads sheets to the machine and stacks finished work pieces onto pallets. Due to the servo drive motion system the stacking is extremely accurate.

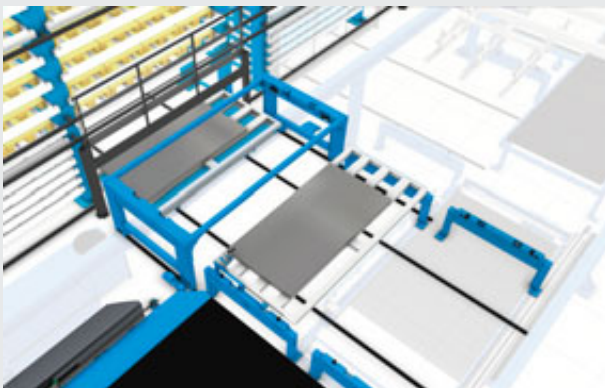
LSR is available in two sizes for 3.0 m and 4.3 m sheet lengths and two main frame lengths with different number of table or wagon positions

SU, sorting unit for small components

A device that moves three EUR pallets to programmed positions under machine table

The unit is used to sort parts coming from the work chute of the machine directly to pallets

Perfect low-cost solution for automatic small part sorting



Night Train connection

With LST and LSR Combi Genius can be connected to flexible manufacturing system for continuous unmanned production

	SORT	UNLOAD	LOAD / UNLOAD	SORT	LOAD / UNLOAD SORT	FMS
	SU	UDC	COMPACT EXPRESS	LST	LSR	NIGHT TRAIN CONNECTION
COMBI SHARP 1225	●	●	●			
COMBI GENIUS 1225	●	●	●	●		●
COMBI GENIUS 1530	●	●	●	●	●	●
COMBI GENIUS 1540	●	●			●	●

Smart software

The Prima Power software suite is a true ecosystem that provides the ideal solution to assist the customer in all phases of production, from offline programming to production data collection and reporting.

Prima Power software is developed for any customer use including off-line, on-board and on mobile devices.



Industry 4.0

Focusing on connectivity and interaction between machines, people and processes, Prima Power is improving operational efficiency, connecting machines to a single platform, enabling seamless production information flow and maximizing machine performance.

To help our customers to fully capture the experience of Industry 4.0 and unleash the business potential of digital manufacturing, Prima Power has built a unique Industry 4.0 solution offering in three key areas: Smart Machines & Factories, Smart Software and Smart Remote Care.

OFFICE

PRODUCTION

MACHINE

Prima Power ERP connection

NC Express e3

- Offline programming

Tulus® Power Processing

- Offline programming
- Planning
- Reporting
- Production monitoring

Tulus® Terminal

- Production monitoring
- Product routing

Tulus® Office

- Planning
- Production reporting

Tulus® e-Kanban

- Digital orders

Tulus® Production Reporting / Tulus® Performance Reporting

- Reporting

Tulus® MUPS

- Production monitoring

Tulus®
NC Express e³

Prima Power's Tulus® and NC Express e3 software maximize throughput of manufacturing.

Tulus® Cell

- Planning
- HMI

Prima Power Services: Key to better productivity

We believe in long-term relationship with our partners, and we think that the real product we deliver to our customer is not just the machine itself, but the production capacity that our customer can achieve with our products and technology. The heart of Prima Power service is the common goal we share with our customer: start, maintain and develop the plant's production capacity and maximize it.

Our Service covers the whole life cycle of the system and technology and contributes to reach one goal: maximize the productivity and the profit for our customers.



REMOTE CARE

A service for the remote diagnostics and assistance. Skilled service engineers are available to operate remotely with the customer's CNC.



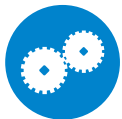
FIELD SERVICE

In addition to preventive maintenance, we offer high-quality corrective maintenance to guarantee fast recovery when there is a problem. With more than 12,000 machines installed in more than 80 countries, we are able to give our customer the required assistance no matter where they are.



SERVICE AGREEMENTS

We continuously develop preventive maintenance plans for Prima Power machines. Maintenance visits are performed according to the task list specified for each machine type.



SPARE PARTS

Original Prima Power spare parts to guarantee full performance and prolonged durability.



CONSULTATION

Wide range of consultation services on machine operation, programming and maintenance.



UPDATES & UPGRADES

The modularity of the product range often allows upgrading of a machine or manufacturing system even years after the original delivery.

Contacts

Find your local Prima Power representative at
primapower.com



