



DOT PEEN AND SCRIBING MARKING SYSTEMS

Versatile solutions for high quality performances



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DOT PEEN AND SCRIBING MARKING SYSTEMS

The punch of BERMA Macchine dot peen marking systems carries out very close points that form solid or dotted lines, depending on the parameters set, which compose in turn the characters indicated from the user to the device.

In scribing systems the punch carries out an incision by crawling on the detail that is being processed.

The choice of the most suitable method depends on the material that has to be marked and the quality requirements.

Marking systems features

BERMA Macchine's dot peen and scribing systems are known for their ease-of-use in the creation and management of marking programmes.
They are suitable for the identification of components that have a maximum surface hardness of 62 HRC.
In addition to the high marking speed and proven robustness and reliability (over 45 years of experience), our machines can be managed independently from the PC (stand alone), and can be connected to other devices via proprietary protocols (bermaCMD), or fieldbus (MODBUS).

Safety First: our markers are entirely designed and assembled in Italy, in compliance with the machinery directive and all the other relevant safety regulations.



Please note: images and technical data shown in this catalogue are purely indicative and subject to continuous updating e improvement; the manufacturer reserves the right to modify them at any time and without notice.

Electromagnetic drive

Very versatile and uniform solution. Today it is more powerful thanks to the introduction of a sensor designed for monitoring solenoid temperature on certain models. It is best suited for most of marking needs, both on mechanical and non-mechanical parts.

Pneumatic drive

High energy solution used to reach marking depths up to 5/10 mm on special steels and carpentries that subsequently have to be painted or galvanizated.





Scribing pneumatic drive

To the dot peen solutions, it carries out a particularly quiet incision by crawling suitable for integrated solutions, where there are several marking heads that operate simultaneously (e.g. robotic workcells).



OUR PHILOSOPHY



Up to 1000 layouts managed without PC Logo import from BMP, SVG, DXF, DWG and PLT files Direct Part Marking technology (DPM) Upload (variables) and download (report) of excel files Remote assistance Remote control of the operator panel Customization (Industry 4.0)

Firmware DDTLITE: - Software Identify3

Thanks to the experience achieved in numerical control marking, we have developed a simple and modern software suite which allows to manage all the features of BERMA marking systems, both dot peen/ scratch or laser.

The controller with HMI dashboard and the Firmware allow BERMA machines to work without a PC (stand-alone) and to manage 1000 different marking layouts, each containing up to 100 variable information.

The association of a proprietary hardware and software makes our systems extremely flexible, ready to acquire data from databases (Excel, Access, MySQL, etc.) and to be integrated (bidirectional connection) with ERP and MES software (SAP, AS400, etc..).

The new Identify3 marking software has been designed to feature a very simple and intuitive user interface which incorporates the structure of the most modern 2D Cad programs.

Layout creation includes:

- alphanumeric markings with various fonts and PC "Truetype" fonts
- Barcocode, QR and DMC codes marking
- Logo import from BMP, SVG, DXF, DWG and PLT files
- graphic tools and much more.

The integrated remote control function, available both from PC or Dashboard, allows our technicians to remotely connect the device and to carry out diagnostics, training and to solve problems related to the use of the marking system anywhere (It requires an active internet connection)



Benchtop machine with a marking area of 130 x 100 mm

This benchtop machine is extremely accurate, versatile and easy to use; suitable to mark small parts such as plates, gears and other mechanical components.

• The hardened gear drive system makes this device extremely reliable and long-lasting.

Thanks to its large marking area, the machine can mark a huge range of pieces and features a led-lighted worktop which allows a clear view of the operations in progress.

The Berma b130 is available in different configurations: with electromagnetic driven punch (DOT6) or pneumatic driven punch (TOP6), depending on materials and marking process. The standard version features a manual height adjustment of the marking head, while the b130Z version comes with a motor controlled height adjustment.

DATASHEET			
	DOT6-b130	TOP6-b130	
Marking Area	130 x 1	00 mm	
Punch operating type	Electromagnetic	Pneumatic (6 bar)	
Punch size	Ø 4 mm	Ø 3 mm, Ø 6 mm	
Max. actuation frequency	0 – 100 Hz		
Connections	USB, Wi-Fi, RS-232, digital I/O 24 VDC		
Embedded communication protocols	bermaCMD (ASCII), MODBUS RTU @ RS-232, ProFinet*		
Weight	18 Kg.	20 Kg.	
Dimensions (W x H x D)	240 x 720 x 337 mm		
Column height (standard)	600 mm		
Piece max height	270	mm	



b130

Dange

Hot





b250 Benchtop machine with a marking area of 250 x 200 mm

1 2 3

4 5 6

1 8 9

Berma

b250Z

aberma

High-performance benchtop dot peen marking machine with extended marking area, suitable for hi-speed writing of long or multiple alphanumeric texts and DMC codes.

The toothed belt transmission system with ball recirculating carriages and the double column mounted marking head make this device almost unbreakable.

In example, this machine can be used for marking multiple parts at the same time, or plates and other large components.

The Berma b250 is available in different configurations: with electromagnetic driven punch (DOT6) or pneumatic driven punch (TOP6), depending on materials and marking process.

The standard version features a manual height adjustment of the marking head, while the b250Z version comes with a motor controlled height adjustment.

DATASHEET			
	DOT6-b250	TOP6-b250	0
Marking Area	250 x 2	200 mm	
Punch operating type	Electromagnetic	Pneumatic (6 bar)	
Punch size	Ø 4 mm	Ø 3 mm, Ø 6 mm	
Max. actuation frequency	0 - 1	00 Hz	
Connections	USB, Wi-Fi, RS-232	B, Wi-Fi, RS-232, digital I/O 24 VDC	
Embedded communication protocols	bermaCMD (ASCII RS-232,	bermaCMD (ASCII), MODBUS RTU @ RS-232, ProFinet*	
Weight	45 Kg.	46,4 Kg.	
Dimensions (W x H x D)	448 x 834	448 x 834 x 665 mm	
Column height (standard)	600	600 mm	
Piece max height	270 mm		4

(*) The ProfiNet protocol requires an additional Gateway

Pikkyo - Pikkyo-XL

Free to mark anywhere

Innovative and functional marking machine, light but with an excellent balance between mechanical stability and easy handling. Thanks to its 18V lithium ion battery, the Pikkyo marker is completely independent of any external power source; this is the meaning of "Free to mark anywhere".

It features an electromagnetic punch with temperature control system which prevents possible overheating.

The marking area is equal to 74x30 mm (standard version) or 140x30 mm (XL version) and is supplied with two batteries and dedicated charger.

PIKKYO is equipped with a double ergonomic handle that allows a stable and safe grip both to right or left-handed people and with an adjustable fixing mask to be used on different surfaces. This highly reliable marker does not require any special maintenance and is equipped with the standby function for energy saving which allows a longer battery life.

The battery guarantees an autonomy of use of 115 minutes and a complete recharging in 75 minutes. Wi-Fi connectivity makes the system totally "wireless".





p50c - p80c Compact portable systems

Portable devices with a small lightweight marking head in order to significantly increase the handling.

Designed for an intensive use in marking parts on assembly lines, where the separate controller with HMI dashboard is usually located next to a computer or a code reader.

These machines feature an adjustable fixing mask to be used on different surfaces.



Separate controller with HMI dashboard

DATASHEET			
	DOT6-p50c	DOT6-p80c	
Marking Area	50 x 30 mm 80 x 30 mm		
Punch operating type	Electrom	nagnetic	
Punch size	Ø 4 mm		
Max. actuation frequency	0 – 100 Hz		
Connections	Wi-Fi, USB, RS-232, digital I/O 24 VDC		
Embedded communication protocols	bermaCMD (ASCII), MODBUS RTU @ RS-232, ProFinet*		
Marking head weight	3 Kg.	3,3 Kg.	
Marking head dimensions (W \times H \times D)	134 x 223 x 290 mm	175 x 224 x 304 mm	

(*) The ProfiNet protocol requires an additional Gateway



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p80

Portable machine with a marking area of 80 x 30 mm

This portable marking machine has been designed with the purpose of make the marking process of bulky parts simpler, even when they are too big or too heavy to be moved.

> The ergonomic handles (gun-type or double grab) guarantee a fast and safe grab. The TOP6 model, with pneumatic driven punch, is the best-in-class tool to all the technicians who need to mark structures and carpentry too difficult to move, which require deep engraves to assure marks readability even after subsequent surface process such as painting or galvanizing. The machine is supplied with an adjustable fixing mask to be used on different surfaces; a neodymium magnets mask is available as option. A dedicated stand allows the machine to be used as a benchtop device.

Like all Berma marking machines, the TOP6 model uses Wi-Fi connectivity to be fully remote controlled through the Identify3 PC software included.

Double handle

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DATASHEET			
	DOT6-p80	ТОР6-р80	
Marking Area	80 x 3	0 mm	
Punch operating type	Electromagnetic	Pneumatic (6 bar)	
Punch size	Ø 4 mm	Ø 3 mm, Ø 6 mm	
Max. actuation frequency	0 – 100 Hz		
Connections	Wi-Fi, USB, RS-232		
Embedded communication protocols	bermaCMD (ASCII), MODBUS RTU @ RS-232, ProFinet*		
Weight	4,1 Kg	4,4 Kg	
Dimensions (W x H x D)	175 x 290 x 415 mm		

p140 Portable machine with a marking area of 140 x 30 mm



This machine with an extended working area is suitable for marking VIN codes (Vehicle Identification Number), especially in Automotive and Agriculture Machinery sectors and where long marks are needed, even with large fonts (from 10 - 12 mm). The p140 is supplied with an adjustable fixing mask to be used on different surfaces; a neodymium magnets mask is available as option.

Wi-Fi connectivity makes the system to be controlled and set up by remote, without any wiring.

DATASHEET		
	TOP6-p140	
Marking Area	140 x 30 mm	
Punch operating type	Pneumatic (6 bar)	
Punch size	Ø 3 mm, Ø 6 mm	
Max. actuation frequency	0 – 100 Hz	
Connections	Wi-Fi, USB, RS-232	
Embedded communication protocols	bermaCMD (ASCII), MODBUS RTU @ RS-232, ProFinet*	
Weight	5,4 Kg.	
Dimensions (W x H x D)	215 x 294 x 415 mm	
*) The ProfiNet protocol requires an ac	ditional Catoway	

Options

Recommended plug-and-play accessories

Automatic plates feeder

Fully integrated electro-pneumatic (F axis) unit; it is designed to automatically load/unload plates under the marking head. This device speeds up the marking process to hundreds of machined parts per day.



DATASHEET

Plates size: from 25 x 25 mm to 120 x 100 mm Plates thickness: 0,5 mm Storage capacity: 150 plates Plate presence and empty storage sensors Device software embedded in the marking machine

Gateway U-Gate and netTAP NT 50

These converters enable the remote managing of the BERMA marking systems, through the MODBUS TCP (U-Gate) or PROFINET (netTAP NT 50) field bus protocols. By using U-Gate or netTAP it is also possible connect our marking machines to Database, ERP or MES software and other industrial automation equipment. (i.e. PLC, Robot).



Rotary axis device

This automatic tool allows to mark cylindrical parts through an adjustable mounting on a spindle (manual or pneumatic). Its software is embedded in the marking system which guarantees a plug-&-play application as a W interpolated axis.

DATASHEET (125 mm STANDARD SPINDLE)

Inner hold Ø: from 36 to 85 mm; Outer hold Ø: up to 125 mm; Dimensions of the workpiece (Max.): Ø 250 mm - weight: 8 Kg.

Bench column for portable devices

Through this accessory few and simple operations are needed to transform any BERMA dot peen portable device in a solid benchtop marking machine. This allows to carry out markings both on bulky parts and on small objects with a single device.



Integrable dot peen and scribing marking systems

Dot peen identification systems designed to be integrated in other machines, robotized islands, production and assembling lines; small dimensions and weights simplify the fitting on the production process.

These devices feature a direct connection of barcode readers (RS-232 port), while proprietary protocols (bermaCMD) and standard fieldbus (MODBUS) are embedded to enable the communication to other devices; in addition to this, a digital I/O port at 24VDC is available.

Berma Integrable system benefits:

- Storage capacity up to 1000 marking layouts
- Remote control via serial and fieldbus protocols
- Solid construction, high reliability
- Reduced maintenance
- Direct and permanent marking on the part

i80-Wi-Fi

The DOT6-i80-Wi-Fi model is an extremely compact and versatile "all in one" dot peen marking system, designed to be easily integrated into automatic lines, robotic islands and other machines.

The control electronics is fully onboard the marking head, which features the following connections:

- Wi-Fi and USB connections to the Identify3 marking PC-suite (included).
- 24VDC digital I/O for Start, Stop, Reset, Ready and End of Marking process
- RS-232 port for remote control through ASCII protocol (bermaCMD), or fieldbus (MODBUS RTU)

DATASHEET	
	DOT6-i80-Wi-Fi
Marking Area	80 x 50 mm
Punch operating type	Electromagnetic
Punch size	Ø 4 mm
Max. actuation frequency	0 – 100 Hz
Connections	USB, Wi-Fi, RS-232, 24VDC digital I/O
Embedded communication protocols	bermaCMD (ASCII), MODBUS RTU @ RS-232, ProFinet*
Weight	6,5 Kg.
Dimensions (W x H x D)	199 x 350 x 185 mm



i50 - i80

Integrable marking systems

These devices stand out for a light and extremely compact marking head, especially designed to be fitted in dynamic applications like the wrist of a robot.

The i50 model, with electromagnetic driven punch (DOT6 version), features the most reduced size marking head of entire Berma range and it is suitable in space-less applications.

The i80 model can be configured with electromagnetic driven punch (DOT6), or with pneumatic driven punch (TOP6); this latter version is used where a deep marking is required. All the machines can be supplied with a dust protective cover of the mechanics (optional).



DATASHEET			
	DOT6-i50	DOT6-i80	TOP6-i80
Marking Area	50 x 30 mm	80 x 3	0 mm
Punch operating type	Electron	nagnetic	Pneumatic (6 bar)
Punch size	Ø 4	Ø 4 mm Ø 3 mm, Ø 6 mm	
Max. actuation frequency		0 – 100 Hz	
Connections	Wi-Fi, USB, RS-232, digital I/O 24 VDC		
Embedded communication protocols	bermaCMD	(ASCII), MODBUS RTU @	RS-232, ProFinet*
Marking head weight	3,1 Kg.	3,7 Kg.	4,7 Kg.
Marking head dimensions (W \times H \times D)	128 x 297 x 86 mm	180 x 325 x 111 mm	180 x 337 x 118 mm (6mm punch)



i100x - i170x - i200X

Integrable marking systems





Thanks to the large marking area, these models can mark components with multiple lines of code. The solid construction, with a double linear guide on the Y carriage, guarantees an extraordinary reliability and allows the machine to be equipped with of up to 16 mm diameter punches. This feature allows to reach high marking depth, suitable for the railway and other heavy industries.

In addition to the i100X and i170X standard models, the extended version i200X is now available on demand; it features a 200 x 200 mm working area. All the machines can be supplied with a dust protective cover of the mechanics (optional).





La berne

DATASHEET

DATASTILET				
	DOT6-i100X	DOT6-i170X	TOP6-i100X	TOP6-i170X
Marking Area	100 x 80 mm	170 x 110 mm	100 x 80 mm	170 x 110 mm
Punch operating type	Electron	nagnetic	Pneumat	ic (6 bar)
Punch size	Ø 4	mm	Ø 3 mm, Ø 6 i	mm, Ø 16 mm
Max. actuation frequency	0 – 100 Hz			
Connections	Wi-Fi, USB, RS-232, digital I/O 24 VDC			
Embedded communication protocols	bermaCMD (ASCII), MODBUS RTU @ RS-232, ProFinet*			oFinet*
Marking head weight	8,2 Kg.	17,5 Kg.	9,2 Kg.	18,5 Kg.
Marking head dimensions (W x H x D)	234 x 285 x 212 mm	356 x 307 x 321 mm	234 x 303 x 212 mm (6mm punch)	356 x 325 x 321 mm (6mm punch)

g130x



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Scribing system with a working area of 130 x 60 mm

Scribing marking systems suit all those applications where safety regulations require a reduced noise level and the dot peen marking technology could be too much noisy (i.e. electro-welded carpentry with the use of tubes).

The BERMA Macchine's TOP6-g130X version guarantees a high precision – depth marking ratio, suitable also for optical recognition applications (OCR, Optical Character Recognition).

Its scribing marking head can be mounted on columns or integrated into other machines, production and assembling lines, or robotic islands.

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DATASHEET	
	TOP6-g130X
Marking Area	130 x 60 mm
Punch operating type	Pneumatic (6 bar)
Punch size	Ø 16 mm
Connections	USB, Wi-Fi, RS-232, 24VDC digital I/O
Embedded communication protocols	bermaCMD (ASCII), MODBUS RTU @ RS-232, ProFinet*
Weight	14 Kg.
Dimensions (W x H x D)	289 x 245 x 272 mm

ABOUT BERMA

The BERMA's staff is always at customers' disposal to identify the most suitable solution for their identification and marking needs.

BERMA is an Italian company that has been dealing with industrial marking since 1974.

Founded by Mauro Bergamini, the company began its journey by producing pneumatic machines and tools that revolutionized the sector of traceability of mechanical parts.

In the mid-eighties, the company developed its first CNC marking systems daisy-wheel based, that has been introduced Berma into dot peen technology, which began a decade later.

During 2011 the management passed from Mauro Bergamini to his son, Fabrizio Bergamini, who has completely renewed the company, by launching the range of laser markers and starting the internationalization process. To consolidate the company's growth process, in 2013 Berma obtained the ISO9001 certification (issued by TUV) and increased its presence on the Italian and German countries.

What makes Berma a leading company in the industrial marking sector is the self-developed hardware and software platforms, the same for all our technologies (dot peen, scratch and laser systems).

These skills, along with the experience achieved during years of partnership with mechanical and automation companies, allow us to face all the challenges that concern IoT and robotic era.







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