SPA2 NANO I UV

SMART | VERSATILE | FUTURE-READY

Macsa id
a code you can trust

Appliance lettering
ABS

Mouthwash bottle
PET

Chocolate spread lid
PP

Snack wrapping
BOPP FILM

Snack bag
CPP

SPA2
SMART PACKAGING APPLICATIONS

NANO UV, BY MACSA THE FUTURE OF CODING IN YOUR HANDS

Macsa id, the specialist in laser coding technology

Macsa id is one of the industry leaders in laser marking & coding. Holding patents in more than 30 countries around the world, Macsa id has always been at the forefront of innovation, sustainability, and affordability. Beginning with the development of the first laser for dynamic coding on production lines, to the first fiber laser for inline marking, Macsa id was the first company worldwide to design a laser specifically for small character coding.

All of this is made possible by Macsa id's commitment to innovation and by investing 10% of revenue in R&D&I. Not only does Macsa id develop products and services which enable its customers to be environmentally compliant, it also spearheads the implementation of Industry 4.0 solutions.

Nano UV by Macsa ID: Setting new standards in marking efficiency.

Macsa Id is proud to introduce the new Nano UV, a cutting-edge solution that incorporates UV technology, providing the versatility needed to meet both current and future demands. This state-of-the-art device excels in high-contrast marking, ensuring clear and distinct results. Its damage-free capabilities guarantee the integrity of your products, while its high-speed performance ensures efficiency in marking processes.

The Nano UV is not just a solution for today; it's a forward-looking tool that anticipates and adapts to the challenges of tomorrow.

THE CODING AND MARKING LASER SOLUTION THAT REDUCES YOUR CARBON FOOTPRINT

Climate change and the need to reduce carbon emissions are the number one global priority today. With the declaration of climate emergencies by governments at all levels, companies are striving to find ways in which they can contribute, either by reducing their own emissions or by supplying goods and services to enable others to do likewise.

Laser coders are attractive alternatives to inkjet where carbon emissions are concerned because they consume less energy and because there are no solvent emissions. Furthermore, Macsa id is working with its key component suppliers to reduce the carbon emissions associated with the manufacture of their products.

Step into the future: UV lasers and monomaterial synergy

The use of monomaterials constitutes a crucial element in the modernization of packaging.

Under this premise, design emerges as a decisive tool for the research and development of monomaterial packaging, ensuring food safety, reducing waste, and facilitating recycling.

The precision inherent in UV laser technology aligns seamlessly with the commitment to environmental responsibility and resource efficiency embodied by the monomaterial concept. This collaborative utilization of UV lasers and monomaterials not only augments precision manufacturing but also underscores a conscientious approach toward sustainable innovation and progress.

Lasers are the smart choice

1. **Clean.** Lasers use green technology with no waste and no risk of ink spills.
2. **Versatile & reliable**. With fast and precise printing in micro and large formats.
3. **Easy to use.** Anyone can quickly learn to control a laser.
4. **Permanent mark**. Ideal to avoid counterfeiting and to ensure brand protection.
5. **Cost-effective.** After a year, laser will have cost less than an inkjet system.

SPA2 NANO UV BY MACSA ID

UNIVERSAL AND FUTURE-READY

With high quality performance and at a very competitive price. This is your chance to change.

EASY TO INSTALL

It is compact, lightweight and easy to connect. The wizard tool reduces set-up time avoiding the trial and error approach of other equipment.

Easily removable filters for cleaning

EASY TO SERVICE

Its advanced laser technology and consumable-free operation reduce maintenance budgets to a minimum.

On-line video tutorials enable quick and easy maintenance.

LED status indicator

Easy rotation head

Multilane holders for movable laser's position

EASY TO INTEGRATE

The multiple I/O's digital signal, as well as its rotating head, allow the best integration in complex production lines.

EASY TO COMMUNICATE

The latest on laser's electronics is included to allow compatibility with multiple communication standards in real-time condition.

EASY TO MANAGE

Ready to work with Integranet 4.0. The status of all equipment can be remotely controlled to monitor the efficiency of your production lines and to plan maintenance

EASY TO USE

The MarcaTouch OS helps to easily Create, edit and control the laser system. Making complex layouts in few taps, reducing creation times by up to 50W.

EASY TO OWN

The competitive total cost of ownership of an SPA2 NANO UV laser coder challenges myths about the cost of laser systems.

An SPA2 NANO UV laser coder is significantly more affordable than an equivalent inkjet printer.

ADD VALUE THROUGH MACSA ID UV LASER MARKERS.

1

ULTIMATE TRACEABILITY EXCELLENCE

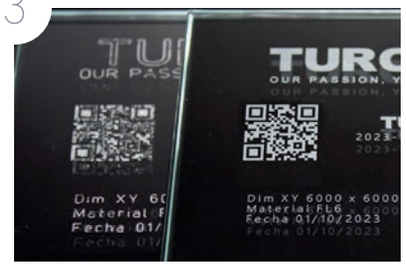
Sectors are seeking greater capabilities in tracking and verifying the origin, authenticity, or quality of individual parts, not just the end product. With the SPA2 NANO UV, your choices are nearly boundless

2

SMALL SPACE, NO WORRY

With its rotating head, enables easy, damage-free marking even in tight spaces, perfectly catering to the demand for smaller yet more functional parts.

3



Conventional vs UV

MASTER TOUGH MATERIALS

Lasers with standard wavelengths typically find it difficult to handle materials that are extremely resilient and resistant to high temperatures. The SPA2 NANO UV brings exceptional versatility to dealing with a vast array of such materials

4

BOOSTING UPTIME AND EFFICIENCY

Various materials can be marked using the same settings, minimizing the need for manual adjustments and thereby enhancing operational continuity and efficiency.

SPA2 NANO UV BY MACSA ID

ADD VALUE THROUGH MACSA UV LASER

1

2

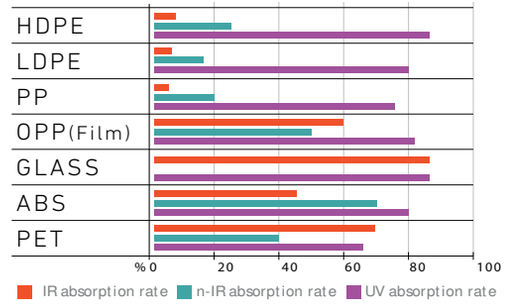
BOLD CONTRAST MARKING

The SPA2 NANO UV delivers bold contrast, boosting the visual quality and legibility.

CONSISTENT QUALITY

The increased absorption ensures uniform marking quality, despite material variations.

REACTION ON PACKAGING MATERIALS



NEAT MARKING, WITHOUT THERMAL TRANSFER

By controlling heat release, It prevents burrs and yellow hues, leading to an immaculate finish. The SPA2 NANO UV leverages a high absorption rate for metals known for their reflective properties, enabling corrosion-resistant marking and treatment.

REDUCED SURFACE DAMAGE

The SPA2 NANO UV utilises a high absorption rate even with gold, silver, copper, and other materials with high reflectance. This minimises soot and burrs while not damaging the surface, so corrosion resistant marking and processing is possible.

NOW IS THE BEST TIME,
SELECT SPA 2 NANO UV

3

4

EMBEDDED UNIQUE SOLUTION

Instead of relying on the conventional analogue scanner typical of laser markers, the SPA2 Nano UV distinguishes itself by adopting a state-of-the-art digital scanner. This cutting-edge technology is the result of pioneering advancements in control methodology. Leveraging this innovative approach, the SPA2 Nano UV achieves heightened performance capabilities.

Additionally, to fully leverage this enhanced functionality, it integrates advanced technology. This technology ensures swift marking times and maintains impeccable quality standards. By combining the digital scanner with this innovation, the SPA2 Nano UV achieves unparalleled efficiency and precision in marking applications.

ENVIRONMENTAL RESISTANCE

The SPA2 NANO UV employs a unique sealing technique to safeguard its optical parts effectively. This protection guarantees that elements like dirt, dust, and moisture do not compromise these components, offering robust performance resistant to environmental conditions.

HIGH-SPEED MARKING

Increased production capacity. Macsa id's proprietary digital scanners and optimised control enable more accurate, faster marking.

MARKING EXAMPLES
BY INDUSTRY

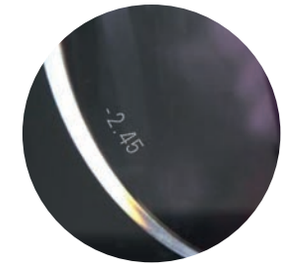
MEDICAL AND PHARMACEUTICAL

Surgery tools
STAINLESS STEEL

Pharmacologic test
PP

Baby care
SILICONE

Pill container
HDPE



Optical lenses
GLASS

COSMETICS, FOOD AND BEVERAGE

Mouthwash bottle
PET

Hand cream
HDPE

Shampoo bottle
PET

Chocolate spread lid
PP

Snack wrapping
BOPP FILM

SPA2 NANO UV

SMART | VERSATILE | FUTURE-READY

AUTOMOTIVE

Day & Night buttons
COATED PP

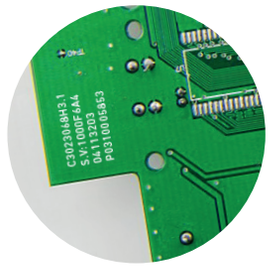
Nuts and bolts
STAINLESS STEEL

Car windshield
GLASS

Electrical cover part
PA6 + GF30

Light switch
ABS + PC

ELECTRONIC



Electronic board
PCB

Keyboard
PBT

Microchip board
THERMOPLASTIC

Appliance lettering
ABS

Electric accessories
PC + ABS

HIGH QUALITY MARKING

FOR A WIDE RANGE OF MATERIALS.

MATERIAL		TECHNOLOGY
Family	Substrate	UV
		wavelength 355 µm
Wood, paper and board	Wood	●
	Thermal label	●
	Paper	●
	Board	●
	Metallised board	●
Food	Fruits and vegetables	●
Glass	Glass	●
	Glass Fiber	●
Ceramics	Ceramic	●
Plastics	Polypropylene (PP)	●
	Low density polyethylene (LDPE)	●
	High density polyethylene (HDPE)	●
	Polystyrene (PS; GPPS and HIPS)	●
	ABS	●
	Polyacetal (POM; polyoxymethylene)	●
	Polyamide (PA)	●
	Polycarbonate (PC)	●
	Polyethylene terephthalate (PET)	●
	Polybutylene terephthalate (PBT)	●
	Polyvinyl chloride (PVC)	●

● Excellent Reaction ● Good Reaction ● Poor Reaction

MATERIAL		TECHNOLOGY
Family	Substrate	UV
		wavelength 355 µm
	Silicone coated	●
	Epoxy resins	●
	Phenolic resins	●
	Polyurethane	●
Plastic foams	Polystyrene foam	●
	Polyethylene foam	●
	Polyurethane foam	●
Plastic films and foils	Aluminized foil	●
	Polyethylene terephthalate (PET)	●
	Oriented polypropylene (OPP)	●
Metals	Coated metal	●
	Anodized aluminium	●
	Steel	●
	Aluminium	●
	Copper	●
	Gold	●
	Iron	●
	Metallised board	●
	Nickel	●
Rubber	Natural rubber	●
	Synthetic rubber	●

THE ULTIMATE IN LASER MARKING & CODING TECHNOLOGY.

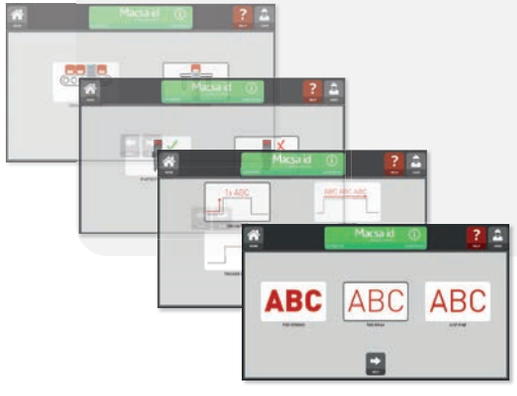
The latest Macsa technological innovation in your hands

The new handheld terminal is one of many important improvements delivered by the SPA2 NANO UV. It is more than a touch screen: it is your point of access to the power and full functionality of the laser and to information related to your production line.

The SPA2 NANO UV is much easier to use thanks to the new, more intuitive software and visual aids in on-line video format with which anyone can master the SPA2 NANO UV quickly and without prior technical knowledge.

WIZARD

This reduces laser set-up time thanks to a step-by-step guide. Operator time to configure a new system can be reduced by up to 90% by avoiding the trial and error system of other equipment.



TEMPLATES

The SPA2 NANO UV incorporates many new templates including barcodes, expiry dates, QR codes and Datamatrix. These can reduce message creation times by up to 50%.

MAINTENANCE VIDEO TUTORIALS

The SPA2 NANO UV video tutorials available through the new handheld terminal guide the operator in the maintenance of the laser, graphically and intuitively. Such maintenance operations, which optimize the operation and efficiency of the laser, should take no more than 5 minutes.

EFFICIENCY AND MAINTENANCE

You can control the efficiency of your equipment and the maintenance of your SPA2 NANO UV from the same touch screen.

MACSA ID

SOLUTIONS AND EQUIPMENT FOR **INDUSTRY 4.0**

PRODUCTS	SERVICES	DATA
Production line management and control	Remote support and preventive maintenance	Performance monitoring

TRACK & TRACE

Monitor all the production steps in real time in order to obtain and record extremely important information about where and how products are made. Implementing this process has become a necessity for manufacturers as their industry faces increasing economic and regulatory challenges.

EFFICIENCY AND OPTIMIZATION

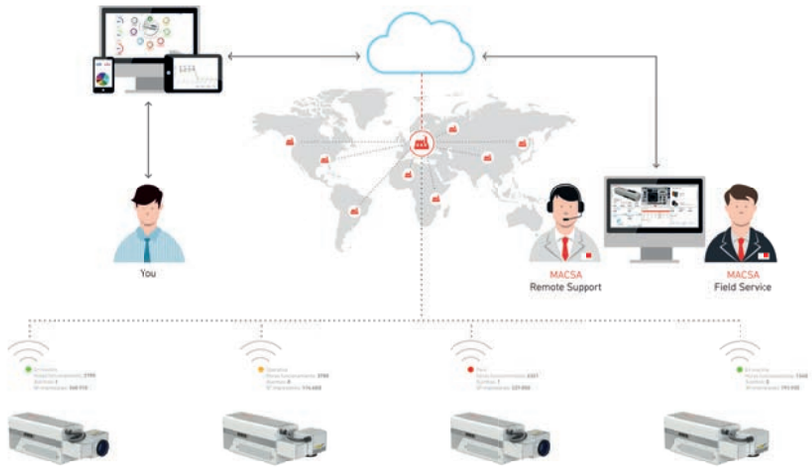
Visualize data using dashboards which reveal trends about your equipment's performance. By providing insight into the ways to improve your operating conditions, processes can be optimized and associated costs reduced.

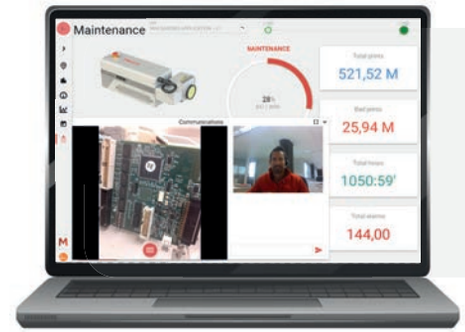
MAINTENANCE SERVICES

Connect with any piece of equipment or device in the plant through universal connectivity to collect real-time machine data whenever is needed. Track and monitor OEE and downtime performance and automate machine status.

IMPROVE PROCESSES

Create smart action plans for process improvement performance through data driven insights. The software also has the capacity to interact with other manufacturing systems for bidirectional information exchange.





integra™ Macsa id

integraoptima

integratrack&trace

integranet 4.0

A CODE YOU CAN TRUST

Coding, tracing and marking solutions worldwide

Macsa id provides solutions to meet your coding, identification and traceability needs and to serve manufacturing companies from such as food, cosmetics, pharmaceutical, automotive and electronics.

HARDWARE SOFTWARE SERVICES CONSUMABLES

The most complete range of CO2, Fiber and DPSS lasers on the market now more complete than ever with SPA2 NANO UV

CO2
Available from 10 to 450W

Fiber
From 20W to 200W

Fiber Film
From 20W to 100W

DPSS
From 6 to 20W (also Green & UV available)

PRECISION
Several features including Macsa's propietary VCS to ensure high print quality even on high-speed production lines.

VCS® Vibration Compensation System

ADAPTABILITY
Wide range of essential and extra accessories to optimise the laser's performance.

Macsa Accesories

VERSATILITY
Integrated into any production line, it can encode over a wide range of materials using 3D printing options.

3D printing

RELIABILITY
Production environments can test the reliability of laser systems. SPA2 lasers are designed to operate reliably in dusty or damp environments even when subject to extreme temperatures.

RAF® Reverse Air Flow

CONNECTIVITY
The lasers include the TCP/IP protocol in order to have complete control of the system from most standard communications.
The new SPA2 platform includes the integration of the most widely used industrial communication protocols such as Profinet and OPC-UA. These are both available in all models upon request.

PROFINET® OPC UA EtherNet/IP

SIMPLICITY
Videos and support material to facilitate its installation and integration.

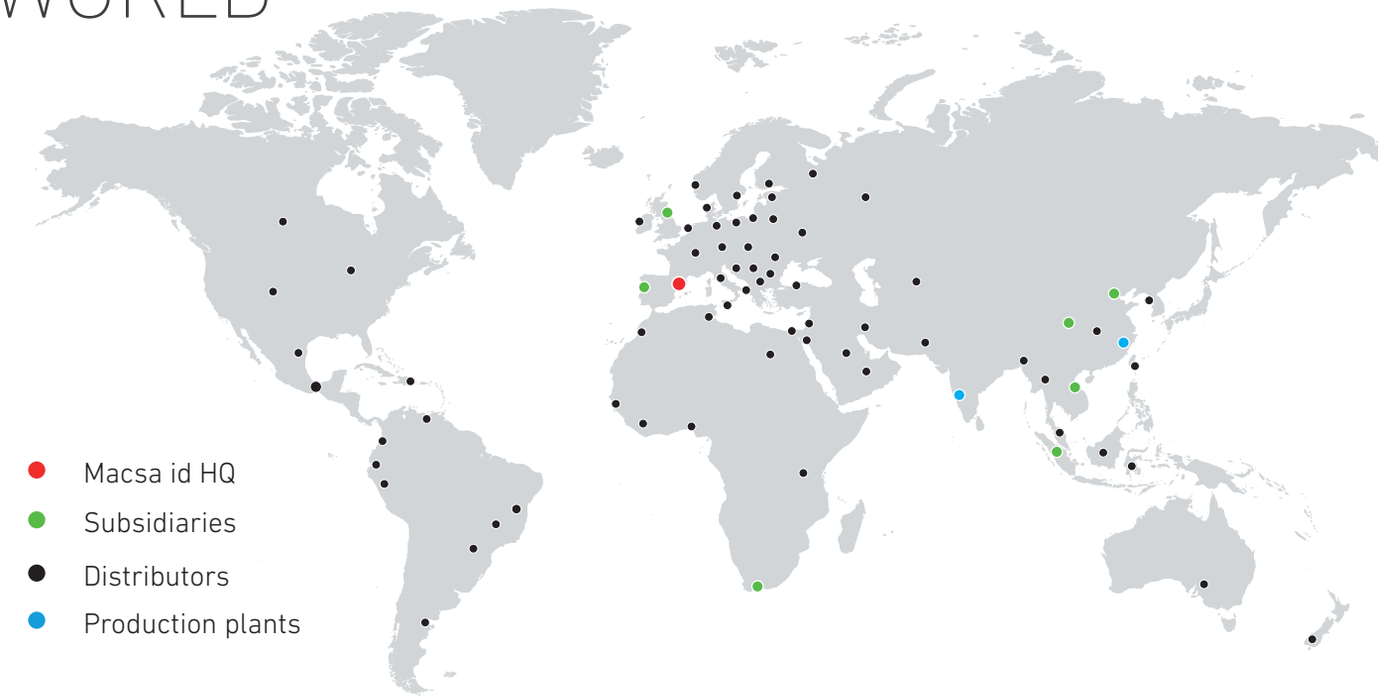
MARCA software©

MACSA ID IN THE WORLD

Macsa id is a company on an international scale with headquarters in Barcelona, 12 technical/ sales centers strategically located around Spain, and a presence in more than 90 countries.

It currently has three production plants, in Spain, China, and India, as well as its own subsidiaries in Portugal, United Kingdom, Malaysia, China, India, and South Africa.

In a highly competitive global environment, Macsa id is a trusted partner that can offer worldwide coverage and a solid range of services across the globe.



ONE COMPANY 4 DIVISIONS

GLOBAL LEADER IN CODING, MARKING, AND TRACEABILITY SOLUTIONS

✓ Coding Solutions

✓ Marking Solutions

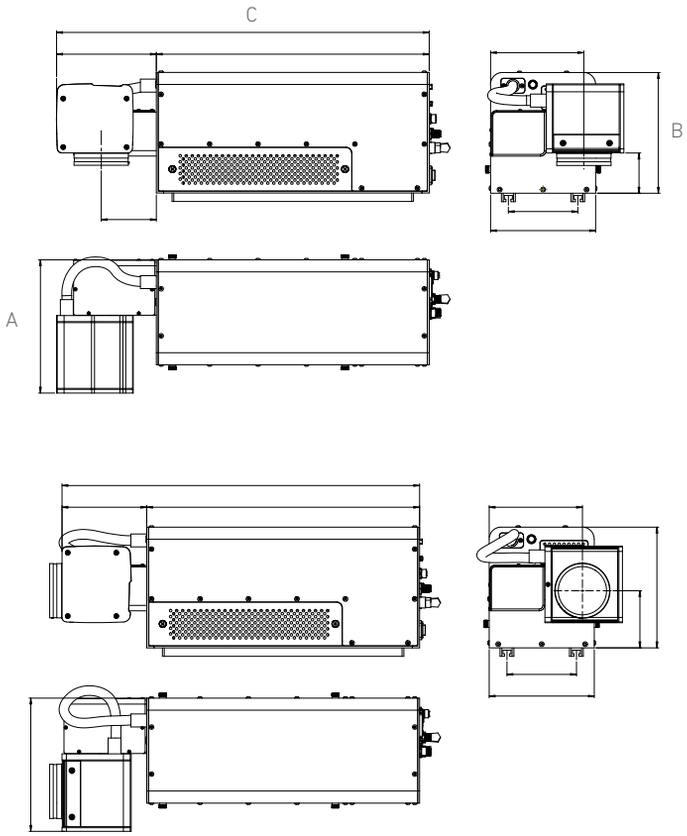
✓ Precut and Microperforation Solutions

✓ Textile Solutions

TECHNICAL DATASHEET

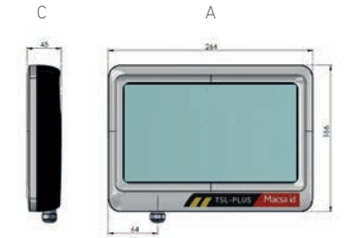
SPA2 NANO UV by MACSA

SMART. VERSATILE. FUTURE-READY.



MODEL					SPA 2 NANO D UV
SYSTEM	Power				5 W
	Technology				Compact Q-Switched DPSS UV Nd:YVO_4
WAVELENGTH	nanometers				355 nm
PULSELENGTH	nanoseconds				< 18 ns
MAINS POWER SUPPLY	100 / 240 V AC 50 / 60 Hz (1 Phase + N) 700 VA				
COOLING	Air Cooled				
FOCAL SPECIFICATIONS FOR LENSES without BE for XQS Head *	M. Area	WD	FL	BD	PD
	20x20	95 mm	56 mm	7	13973
	65x65	133 mm	103 mm	12	4146
	105x105	220 mm	170 mm	20	1516
	175x175	347 mm	254 mm	31	679
	195x195	440 mm	330 mm	40	403
	290x290	580 mm	470 mm	57	198
MARKING HEAD	Xqs internal				Std.
MARKING HEAD ACCESSORIES	Beam exit at 0°-90°				Std.
	Focal distance indicator				Opt.
	Marking area indicator				Opt.
CONTROL	TouchScreen tsl-v3				Opt.
	Pc with Marca software				Opt.
SOFTWARE	Scanlinux				Std.
	MarcaTouch OS 2.0				Opt.
	Marca full graphics pc softw.				Opt.
	TCP/IP protocol				Std.
	Profinet protocol				Opt.
	OPC-UA protocol				Opt.
	Ethernet/IP protocol				Opt.
	Internal barcode generator				Opt.
SAFETY	Electromechanical shutter				Opt.
	Performance level d safety kit				Opt.
ACCESSORIES	Diode Marking Pointer - Encoder Kit - Mounting Support - Photocell Kit				
ENVIRONMENTAL CONDITIONS	Operating Temperature				10 °C (50 °F) to 35 °C (95 °F)
	Humidity				< 95 %, non-condensing
	Vibrations				No vibrations
	Protection Rate				DE IP54 (Dusty Environment)
DIMENSIONS	AxBxC				220 x 200 x 617 mm
WEIGHT	Net Weight				26 kg
	Gross Weight				29 kg

* Customizable marking area also available



CONTROLLER	TSL – V3 Touch Screen
DIMENSIONS (AxBxC)	264x186x45mm
TYPE	Capacitive Touch Screen Display
SIZE	10,1"
	1064 x 600
COLOUR	16,2M
LUMINANCE	340 cd/mq
MEMORY	2 GB
VOLTAGE	12 VDC
CONNECTIVITY	TYCO Connector
SOFTWARE	MarcaTouch™ OS 2.0 or newer
LANGUAJES	26 languages (English, Arabic, Chinese, Czech, Deutsch, Danish, Finnish, French, Greek, Hebrew, Magyar, Indonesian, Italian, Japanese, Korean, Malaysian, Dutch, Polish, Portuguese, Russian, Serbian, Spanish, Swedish, Thai, Turkish, Vietnamese)
INTERFACE	WYSIWYG technology which displays what is going to be printed.
COVER CONDITIONS	Aluminium
IP RATE	IP55 / IP65 (Opt.)
ENVIRONMENT	0 – 40°C, Non-condensing

SPA2 NANO UV by MACSA

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a code you can trust

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