Macsa id®
a code you can trust

SPA F Pulsed

FIBER PULSED LASER
Versatility to mark a wide range of plastics and metals

SPA F Pulsed by **MACSA**
Modular. Better. Complete

SPA F Pulsed

SPA F Pulsed is a Fiber Laser specialized in coding and marking over a wide variety of materials such as films, plastics and metals and other industrial products
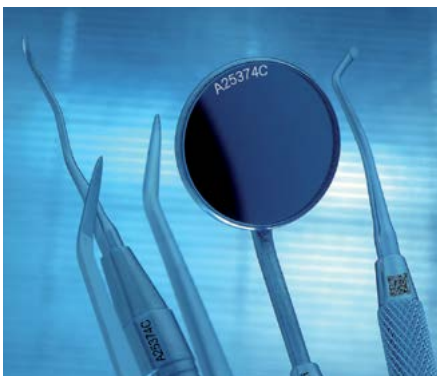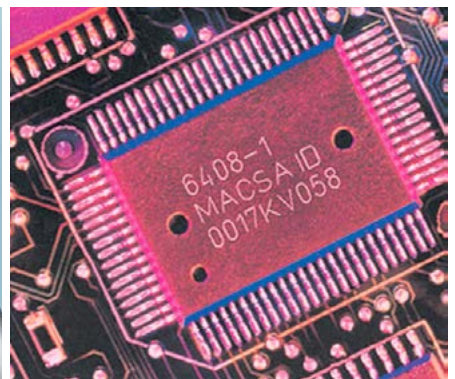
High speed

SPA F Pulsed codes and marks information at a very high speed maintaining and excellent definition, without interruptions even in the most hostile conditions.

Excellent quality marking

SPA F Pulsed has been designed either for marking in metal, plastic and other materials in industrial sectors where an excellent quality marking is required.

Enviromentally friendly

Laser technology is environmetaly friendly as it allows to reduce the costs of consumables, avoids generation of harmful emissions and the consumption of energy is minimum.

SPA is much more than a laser system

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

VCS® Vibration Compensation System

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

3D printing

Reliability. In adverse production environments thanks to IP54 guidelines.

Connectivity. Several softwares which enable it to be operated remotely as well as directly.

optima by Macsa id · **REMOTE CONTROL** · NiceLabel

Simplicity. Videos and help material to facilitate its installation and integration.

MARCA software®

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

Macsa 4.0 solutions and equipment

PRODUCTS	SERVICES	DATA
Management and control of the line production	Remote support	Performance control

integraoptima
integratrack&trace

The modular software to control, manage and optimize the production line.

Maintaining Service

Equipment performance

Macsa id

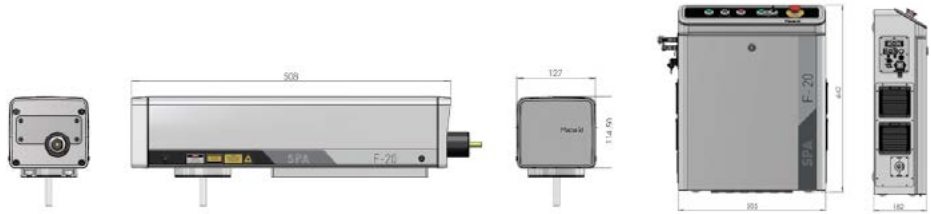## A CODE YOU CAN TRUST
Coding, tracing and marking solutions worldwide

SPA F-10/F-20/F-30/F-50 Pulsed

MODEL	PULSED			
POWER	10W	20W	30W	50W
WAVELENGTH	1.062 µm			
LASER SYSTEM	F -10 PULSED	F -20 PULSED	F -30 PULSED	F -50 PULSED
MAINS SUPPLY	100V - 240V 50 / 60 Hz (1 Phase + N) 400 VA	100V - 240V 50 / 60 Hz (1 Phase + N) 500 VA	100V - 240V 50 / 60 Hz (1 Phase + N) 600 VA	100V - 240V 50 / 60 Hz (1 Phase + N) 700 VA
DIMENSIONS — Head	127x114,50x508 mm			
DIMENSIONS — Cabinet	182x642x505 mm		182x642x505 mm	
WEIGHT	Net weight: 26Kg - Gross Weight: 30Kg			
SYSTEM	Optical isolator and collimator of the laser source, galvanometric scanners built into the marking head. Control and power electronics, drivers of the digital scanners, CPU, power supplies and laser source built into the control cabinet.			

FOCAL SPECIFIC.

			TECHNOLOGY	PULSED				PULSED UHS				
			F -	10	20	30	50	F -	10	20	30	50
MA (mm)	WD (mm)	FL (mm)	BD (µm)	PD (KW/cm^2)	PD (KW/cm^2)	PD (KW/cm^2)	PD (KW/cm^2)	BD (µm)	PD (KW/cm^2)	PD (KW/cm^2)	PD (KW/cm^2)	PD (KW/cm^2)
55x55	141	100	16	9709	19417	29126	48542	27	3482	6964	10446	17409
100x100	205	163	26	3654	7308	10962	18270	44	1327	2653	3980	6634
168x168	347	254	41	1505	3009	4514	7524	69	540	1079	1619	2698
212x212	458	346	56	811	1622	2433	4054	94	291	582	873	1454
242x242	554	420	68	551	1101	1652	2752	-	-	-	-	-
560x560	889	815	132	146	292	438	731	-	-	-	-	-

LEGEND: WD:Working Distance   FL:Focal Length   MA:Marking Area   BD:Spot Beam Diameter   PD:Power Density

IMPORTANT NOTE
- Working Distance (WD): The distance between the laser system base and the surface to be marked.
- Focal Length (FL): The distance between the center of the lens and the surface to be marked.
- Approximate values: These values are an approximation, and they are different for each laser system, due to the different optical paths.

SOFTWARE
- ScanLinux V5.2.7 and later.
- Marca Software V5.6.9 and later.
- Internal Barcode.
- Marca Lite Software.

USER INTERFACE
- Touch Screen.
- Hand Held Terminal.
- PC.

CONTROLLED BY
- Hand Held Terminal with ScanLinux software.
- Touch Screen with ScanLinux software.
- Full Graphics Interface: includes Marca™ software, dongle and Ethernet cable (TCP / IP).
- Marca Lite Software: includes Marca™ software, dongle and Ethernet cable (TCP / IP).

ACCESSORIES
Handheld Terminal-Touch Screen Terminal - Beam pointer - Encoder Kit - Photocell Kit - Alarm Kit - Fume Extractor - Mounting support - Mounting Bracket U-ARM - Marking paper - Protection goggles - Air Cooling Kit

ENVIRONMENTAL CONDITIONS
+15ºC (59ºF) at 40ºC (104ºF) external temperature with 50% Duty Cycle or 36ºC(100ºF) external temperature with 100% Duty Cycle. Humidity between 10% and 95%, without condensation. No vibrations.

AVOID EXPOSURE VISIBLE AND INVISIBLE LASER RADIATION IS EMITTED FROM THIS APERTURE CLASS 4 LASER PRODUCT EN 60825-1 (2014)

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