

SPARTUS®



**LASER WELDING
AND CLEANING
MACHINES**



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Precision and quality with SPARTUS®

On behalf of the SPARTUS® team, we are thrilled to present to you our latest catalogue of laser welding and cleaning machines, designed for modern industrial companies seeking world-class solutions. From the brand's inception, our mission has been to deliver innovative, reliable, and highly efficient solutions that not only meet but exceed customer expectations. Our goal is to create comprehensive welding solutions that help businesses thrive in a rapidly changing industrial environment.

In recent years, by constantly adapting to the industry's needs, we've developed a product range that contains the essence

of advanced welding technology. Each laser welder and laser cleaning machine model featured in our catalogue is the result of the dedicated efforts of our team, who work daily to provide solutions that are not only specialized but also user-friendly.

We invite you to explore our catalogue, which will help you discover how SPARTUS® products can support your business development. The SPARTUS® brand stands by your side, ready to provide advice and assistance at every step – from selecting the perfect device to implementing it in production, and ensuring comprehensive service and technical support.



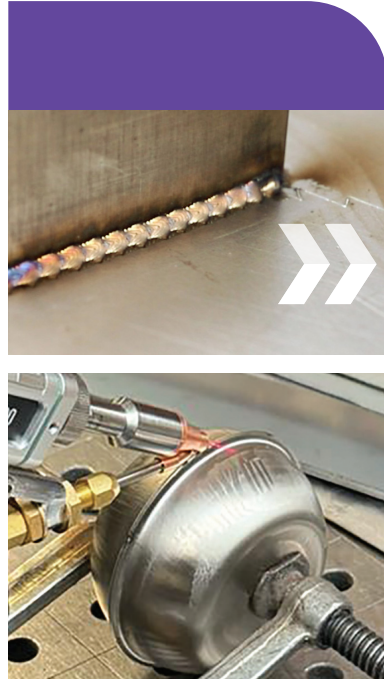
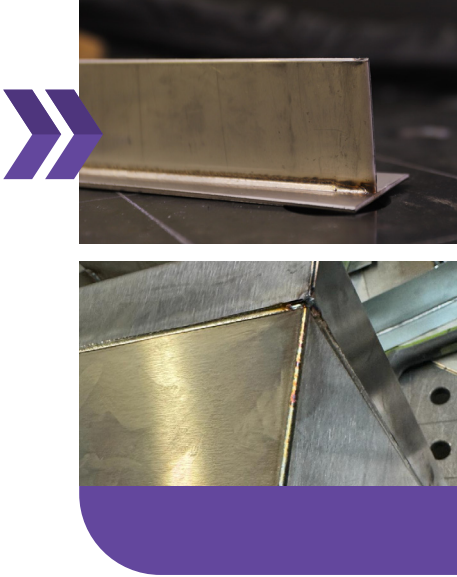


»» WHY IT'S WORTH IT

Laser welding provides numerous benefits that establish it as the preferred method in advanced industrial applications. It delivers unparalleled welding precision, crucial for producing intricate joints. This precision results in thinner and more accurate welds while reducing damage to the base material. Additionally, laser welding minimizes the heat-affected zone, which is vital when working with delicate or thin materials.

The speed and efficiency of this method significantly reduce production time and costs while guaranteeing the highest quality of weld.

ADVANTAGES OF LASER WELDING



» **High level**
of welding precision

» **Clean welds**
that require no finishing

» **Durable and
robust** joints

» **Excellent control**
over the welding process

» **Minimized**
distortions

» **Optimized**
production time

» SPARTUS® LASER HEAD

Modern laser head allows for focal length adjustment. Additionally, it is equipped with a welding wire feeding mechanism. The ergonomic shape and ease of use ensure precise and comfortable work for the operator.



EASY LASER WELDERS

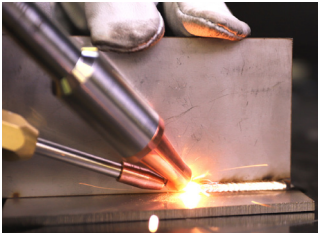
Easy laser welders are available in four power variants: 1.2 kW, 1.5 kW, 2 kW and 3 kW, allowing them to be tailored to various industrial needs. All models are equipped with advanced laser sources, which ensures their high efficiency and reliability. As a result, users benefit from precise welding, process stability and energy efficiency, minimizing operating costs. The range of power options enables optimal adaptation of the machine to specific applications, ensuring efficient and economical production processes.





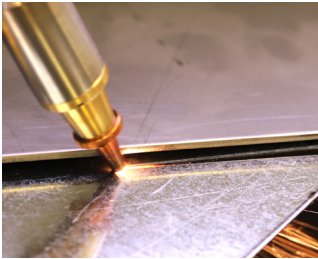
ONE DEVICE
MANY
FUNCTIONS

» WELDING



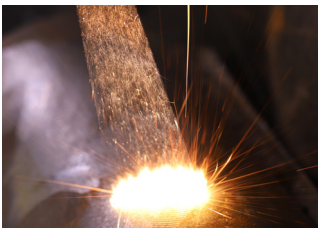
A laser welding machine is superior to traditional welding methods such as MIG or TIG due to its exceptional precision. The laser allows for much smaller welds with microscopic dimensions, significantly minimizing the heat-affected zone on the surrounding material. As a result, laser welding is an excellent choice for seamlessly joining even very small components that are difficult to weld using traditional methods.

» CUTTING



Laser cutting enables the precise separation of various materials, creating accurate and clean edges without requiring additional mechanical processing. This feature, as an additional option in laser devices, allows for cutting stainless steel up to 2 mm thick and carbon steel up to 1.5 mm thick. However, materials like copper and aluminum, which have a high beam reflection coefficient, should not be subjected to laser cutting due to the risk of beam reflection.

» CLEANING



Laser cleaning is an effective method of removing contaminants, paint layers, or rust from material surfaces, while preserving their integrity and quality. This application of laser technology, delivers exceptional material processing efficiency with minimal impact on their structure. By exchanging the focusing lens in the laser head, it is possible to obtain a precise cleaning beam with a width ranging from 30 to 120 mm.

APPLICATION OF WIRE FEEDER IN LASER WELDING

The wire feeder, which is an integral part of the laser welding system, enables precise and controlled delivery of additional material to the welding zone. This not only enhances process efficiency by minimizing material losses but also ensures high-quality welds required for projects where the highest accuracy and durability of joints are essential.

» SINGLE WIRE FEEDER

Designed for precise and stable delivery of welding wire to the welding zone, which is essential in applications requiring the highest quality joints. The feeder enables the production of uniform and clean welds, which are crucial for high-standard productions. Its design ensures seamless integration with various models of SPARTUS® Easy laser welders.



« SP050-01-010

» DOUBLE WIRE FEEDER

The SPARTUS® double wire feeder is designed to increase the efficiency and quality of welding processes in the most demanding industrial environments. The SPARTUS® double wire feeder offers:

Increased productivity

Reduces downtime associated with spool replacement, contributing to speeding up and increasing the efficiency of production cycles.

Versatility

Enables quick adaptation to changing project requirements.

Process optimization

Allows users to seamlessly switch between wires with different properties to adjust the welding process to specific tasks.



« SP050-01-015



PARAMETERS

Output power	1 200W
Input	230V
Operating mode	continuous / modulation
Scanning speed	2 - 6000 mm/s
Scanning width	0 - 6 mm
Frequency	5 - 5000Hz
Cooling type	gas

Duty cycle	100%
Weight	57 kg
Dimensions	730 × 350 × 640 mm

WELDING MATERIALS

Stainless steel	3 mm
Carbon steel	3 mm
Aluminum	3 mm

The set includes:

- ✓ laser source
- ✓ handheld laser head (8,5m) with F150 focus lens
- ✓ wire feeder with 1.2 - 1.6V fi37 rollers
- ✓ 2x wire guide rollers 0.8 - 1.0V fi37
- ✓ insulated steel liner
- ✓ teflon liner
- ✓ set of single nozzles for the laser head
- ✓ single wire feeder tips
- ✓ protective lenses

Available with head

A230



Easy 1500



PARAMETERS

Output power	1 500W
Input	230V
Operating mode	continuous / modulation
Scanning speed	2 - 6000 mm/s
Scanning width	0 - 6 mm
Frequency	5 - 5000Hz
Cooling type	liquid
Duty cycle	100%

Weight	140 kg
Dimensions	956 x 580 x 823 mm

WELDING MATERIALS

Stainless steel	5 mm
Galvanized sheet	4 mm
Iron	5 mm
Mild steel	4 mm
Aluminum	3 mm
Brass	2 mm

The set includes:

- ☑ laser source **Raycus**
- ☑ handheld laser head (9,5m) with F150 focus lens
- ☑ wire feeder with 1.2 - 1.6V f37 rollers
- ☑ cooling liquid
- ☑ 2x wire guide rollers 0.8 - 1.0V f37
- ☑ insulated steel liner
- ☑ teflon liner
- ☑ set of single nozzles for the laser head
- ☑ single wire feeder tips
- ☑ protective lenses

Available with head

F210 lub F230





PARAMETERS

Output power	2 000W
Input	230V
Operating mode	continuous / modulation
Scanning speed	2 - 6000 mm/s
Scanning width	0 - 8 mm
Frequency	5 - 5000Hz
Cooling type	liquid
Duty cycle	100%

Weight	165 kg
Dimensions	956 x 580 x 823 mm

WELDING MATERIALS

Stainless steel	6.5 mm
Galvanized sheet	5 mm
Iron	6 mm
Mild steel	6 mm
Aluminum	5 mm
Brass	3 mm

The set includes:

- ✔ laser source **Raycus**
- ✔ handheld laser head 9,5m) with F150 focus lens
- ✔ wire feeder with 1.2 - 1.6V f37 rollers
- ✔ cooling liquid
- ✔ 2x wire guide rollers 0.8 - 1.0V f37
- ✔ insulated steel liner
- ✔ teflon liner

- ✔ set of single nozzles for the laser head
- ✔ single wire feeder tips
- ✔ protective lenses
- ✔ 4 wire guide rollers 2.0 -2.5V f37*
- ✔ head support for double liner*
- ✔ 6 double welding nozzles*
- ✔ 3 double wire feeder tip*

* additional set elements when choosing a double feeder

Available with head

F210 lub F230



Easy 3000



Option
with a double
feeder

PARAMETERS

Output power	3 000W
Input	400V
Operating mode	continuous / modulation
Scanning speed	2 - 6000 mm/s
Scanning width	0 - 8 mm
Frequency	5 - 5000Hz
Cooling type	liquid
Duty cycle	100%

Weight	220 kg
Dimensions	1140 x 595 x 1080 mm

WELDING MATERIALS

Stainless steel	8 mm
Galvanized sheet	6 mm
Iron	8 mm
Mild steel	8 mm
Aluminum	5 mm
Brass	4 mm

The set includes:

- ☑ laser source **RAYCUS**
- ☑ handheld laser head 9,5m)
with F150 focus lens
- ☑ wire feeder with 1.2 - 1.6V f37 rollers
- ☑ cooling liquid
- ☑ 2x wire guide rollers 0.8 - 1.0V f37
- ☑ insulated steel liner
- ☑ teflon liner

- ☑ set of single nozzles for the laser head
- ☑ single wire feeder tips
- ☑ protective lenses
- ☑ 4 wire guide rollers 2.0 -2.5V f37*
- ☑ head support for double liner*
- ☑ 6 double welding nozzles*
- ☑ 3 double wire feeder tip*

* additional set elements when choosing a double feeder

Available with head

F210 lub F230





WELDING NOZZLE

TYPE 1

- SP050-10-001



WELDING NOZZLE

TYPE 2

- SP050-10-002



CUTTING NOZZLE

- SP050-10-003



WELDING NOZZLE

TYPE 1

- SP050-10-008 wire fi 0.8mm
- SP050-10-010 wire fi 1.0mm
- SP050-10-012 wire fi 1.2mm
- SP050-10-016 wire fi 1.6mm



WELDING NOZZLE

TYPE 2

- SP050-10-208 wire fi 0.8mm
- SP050-10-210 wire fi 1.0mm
- SP050-10-212 wire fi 1.2mm
- SP050-10-216 wire fi 1.6mm



WIRE FEEDER TIP

- SP050-15-008 wire fi 0.8mm
- SP050-15-010 wire fi 1.0mm
- SP050-15-012 wire fi 1.2mm
- SP050-15-016 wire fi 1.6mm



WELDING NOZZLE

TYPE 1

- SP050-10-610 double wire fi 1.0mm
- SP050-10-612 double wire fi 1.2mm
- SP050-10-616 double wire fi 1.6mm
- SP050-10-620 double wire fi 2.0mm



WIRE FEEDER TIP

- SP050-15-610 double wire fi 1.0mm
- SP050-15-612 double wire fi 1.2mm
- SP050-15-616 double wire fi 1.6mm
- SP050-15-620 double wire fi 2.0mm



GRADUATED TUBE

- SP050-12-010



LASER HEAD SUPPORT

- SP050-12-005
single guide



LASER HEAD SUPPORT

- SP050-12-605
double guide



LASER WELDING
MACHINE
parts diagram





PROTECTIVE LENS

- SP050-11-001



FOCUS LENS

F150

- SP050-11-002
- welding, cutting, cleaning
up to 30mm



FOCUS LENS

F400

- SP050-11-003
- cleaning up to 60mm



FOCUS LENS

F800

- SP050-11-004
- cleaning up to 120mm



O-RING FOR THE LENS

- SP050-11-010



INSULATED STEEL LINER

- SP050-16-012 wire fi 0.8-1.6mm
- single



TEFLON LINER

- SP050-17-012 wire fi 0.8-1.6mm
- double



INSULATED STEEL LINER

- SP050-16-612 wire fi 0.8-1.6mm
- double



TEFLON LINER

- SP050-17-612 wire fi 0.8-1.6mm
- double



WIRE GUIDE ROLLER

FI37 V

- SP-ROL371510-0810V
wire fi 0.8-1.0mm
- SP-ROL371510-1216V
wire fi 1.2-1.6mm
- SP-ROL371510-1620V
wire fi 1.6-2.0mm
- SP-ROL371510-2025V
wire fi 2.0-2.5mm



WIRE GUIDE ROLLER

FI37 U

- SP-ROL371510-0810U
wire fi 0.8-1.0mm
- SP-ROL371510-1012U
wire fi 1.0-1.2mm
- SP-ROL371510-1216U
wire fi 1.2-1.6mm
- SP-ROL371510-2025U
wire fi 2.0-2.5mm



LASERFROST COOLING LIQUID

- SP050-90-005



HELMET LS87

• 080-05-001

Field of view: 112x87mm
 Wavelength range: 900-1100nm OD7+
 DIN protection class: 4
 Filtering highly specialized:
 900-1100nm D LB6 + IR LB7 LP S



HELMET LS120

• 080-05-002

Field of view: 112x120mm
 Wavelength range: 900-1100nm OD7+
 DIN protection class: 4
 Filtering highly specialized:
 900-1100nm D LB6 + IR LB7 LP S



SAFETY GLASSES

• SP050-20-003

Wavelength range:
 800-900nm OD>6
 900-1100nm OD>7
 DIN protection class: 4
 Highly specialized filtration:
 800-900nm D LB5 +IR LB6
 900-1080nm D LB5 + IR LB7 LP S



LASERBOX

HEAD PARTS KIT

[single wire feeder]

• SPBOX7-LASER-10

» LASERBOX

LaserBOX is a complete set of spare parts desganted for the head of a laser welding machine. LaserBOX provides everything needed to quickly and efficiently replace worn or damaged components.



LASERBOX

HEAD PARTS KIT

[double wire feeder]

• SPBOX7-LASER-20



SP050-10-001	Welding nozzle TYPE 1	2 pcs
SP050-10-002	Welding nozzle TYPE 2	2 pcs
SP050-10-008	Welding nozzle TYPE 1 wire 0.8mm	3 pcs
SP050-10-010	Welding nozzle TYPE 1 wire 1.0mm	3 pcs
SP050-10-012	Welding nozzle TYPE 1 wire 1.2mm	3 pcs
SP050-10-016	Welding nozzle TYPE 1 wire 1.6mm	2 pcs
SP050-10-212	Welding nozzle TYPE 2 wire 1.2mm	2 pcs
SP050-10-216	Welding nozzle TYPE 2 wire 1.6mm	2 pcs
SP050-15-008	Wire feeder tip 0.8mm	3 pcs
SP050-15-010	Wire feeder tip 1.0mm	3 pcs
SP050-15-012	Wire feeder tip 1.2mm	3 pcs
SP050-15-016	Wire feeder tip 1.6mm	2 pcs
SP050-11-001	Protective lens	4 pcs
SP050-11-002	Focus lens F150	1 pcs
SP050-11-003	Focus lens F400	1 pc
SP050-11-004	Focus lens F800	1 pc
SP050-11-010	O-ring	2 pcs



SP050-10-001	Welding nozzle TYPE 1	2 pcs
SP050-10-002	Welding nozzle TYPE 2	2 pcs
SP050-10-612	Welding nozzle TYPE 1 (double wire 1.2mm)	5 pcs
SP050-10-616	Welding nozzle TYPE 1 (double wire 1.6mm)	5 pcs
SP050-10-620	Welding nozzle TYPE 1 (double wire 2.0mm)	5 pcs
SP050-15-612	Double wire feeder tip 1.2mm	4 pcs
SP050-15-616	Double wire feeder tip 1.6mm	4 pcs
SP050-15-620	Double wire feeder tip 2.0mm	3 pcs
SP050-11-001	Protective lens	4 pcs
SP050-11-002	Focus lens F150	1 pc
SP050-11-003	Focus lens F400	1 pc
SP050-11-004	Focus lens F800	1 pc
SP050-11-010	O-ring	2 pcs

EASY LASER CLEANERS



The most advanced and efficient metal cleaning technology

The SPARTUS® Easy 1500CL/2000CL is an advanced laser cleaning device designed for professionals in the metal processing industry. This machine offers an ideal solution for fast and efficient removal of rust, paint, contaminants, and other unwanted layers from various metal surfaces. Utilizing modern fiber laser technology, SPARTUS® 1500CL/2000CL ensures high-precision cleaning without damaging the base layer of the metal.

ADVANTAGES OF LASER CLEANING

Power - equipped with powerful capabilities, it enables quick and effective cleaning, even of the toughest contaminants.

Technology - the use of laser light allows for precise targeting and removal of unwanted layers without physical contact with the material.

Safety and Ecology - laser cleaning technology is safe for the user and eliminates the need for chemicals, making it environmentally friendly.

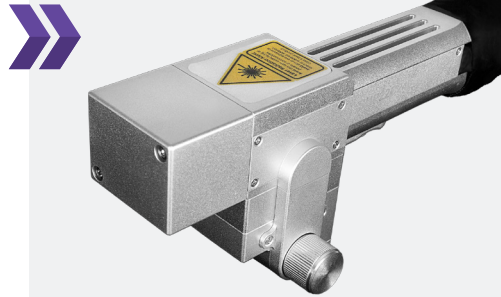
Ease of Use - an intuitive control panel and ergonomic design make the SPARTUS® laser cleaner user-friendly, even for less experienced operators.

Versatility of Applications - ideal for renovation, maintenance, and surface preparation for further processing.



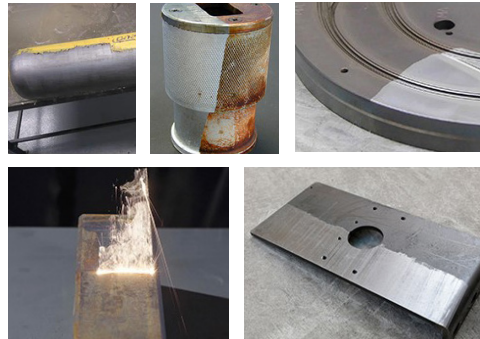
CLEANING HEAD SPARTUS® C220

The exceptionally lightweight and ergonomic SPARTUS® C220 cleaning head is a key component of the laser cleaners. Constructed from lightweight materials, it ensures ease of use even during prolonged operations. Various focusing lenses allow for precise adjustment of the cleaning width to 150 mm, 225 mm, or 300 mm, depending on project requirements. This versatility makes the C220 head highly effective across a range of industrial applications, enabling quick and accurate cleaning of metal surfaces.



APPLICATION OF A LASER CLEANING MACHINE

Perfect for cleaning metals across various industries, including automotive, aviation, machinery manufacturing, and many others. It also performs exceptionally in renovation workshops and maintenance facilities.



Easy 1500CL

Easy 2000CL



PARAMETERS	EASY 1500CL	EASY 2000CL
Output power	1 500 W	2 000 W
Input	230 V	230 V
Duty cycle	100%	100%
Operating mode	continuous	continuous
Scanning speed	2 - 6 000 mm/s	2 - 6 000 mm/s
Scanning width	F400: 0 - 150 mm F600: 0 - 225 mm F800: 0 - 300 mm	F400: 0 - 150 mm F600: 0 - 225 mm F800: 0 - 300 mm
Frequency	5 - 5 000 Hz	5 - 5 000 Hz
Cooling type	liquid	liquid
Weight	140 kg	220 kg
Dimensions	956 x 580 x 823 mm	1140 x 595 x 1080 mm

The set includes:

- ☑ laser source **Raycus**
- ☑ C220 handheld laser head (9,5m)
with F800 focus lens
- ☑ cooling liquid
- ☑ additionally: F400 focus lens
and 5 protective lenses

Available with head

C220





PARTS DIAGRAM
for laser cleaners

Accessories



PROTECTIVE LENS

• SP050-11-071



FOCUS LENS

F600

• SP050-11-076

Cleaning up to 225mm



O-RING FOR THE LENS

• SP050-11-710



FOCUS LENS

F400

• SP050-11-074

Cleaning up to 150mm



FOCUS LENS

F800

• SP050-11-078

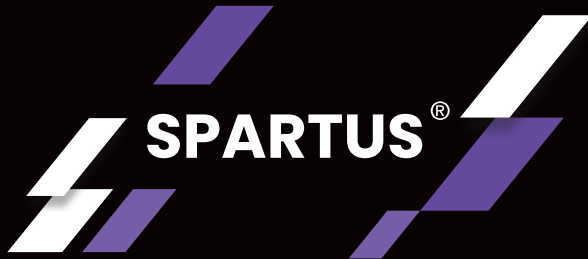
Cleaning up to 300mm



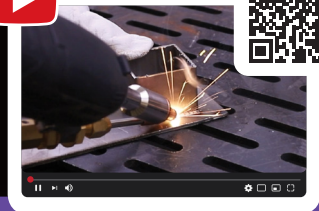
SEAL FOR PROTECTIVE LENS

• SP050-11-740





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