



PREMIUM LASER WELDING MACHINES



Craft-Laser 800 / 1500 S / 2000 WS – Laser welding machines

Hand-held laser welding machines are the **newest revolution** in welding technology and have unbeatable advantages in the thin sheet metal sector compared to the previous conventional welding process.

ADVANTAGES LASER WELDING

compared to conventional welding processes

- + Hardly any warping, incredibly fast, incredibly good quality (even with very thin materials <1 mm)
- + Consumes approx. 70 % less energy
- + Quick and easy to learn
- + High process reliability
- + Extreme time savings with greatly reduced reworking at the same time
- + One of the lightest burners on the market at 680 g
- + 2-channel safety loop for maximum safety

CRAFT LASER ADVANTAGES:

- + Laser cleaning with up to 100 mm scan width with autofocus
- + 3 in 1 device: Welding / cutting / cleaning
- + Complete synergy - no more parameter lists
- + Service-friendly - no more tedious sending in

CRAFT-LASER 800 / 1500 S:

- ▶ Fully integrated wire feed case – no parallel entry of feed data and laser power
- ▶ Extremely simple machine operation thanks to complete synergy characteristics
- ▶ Fully automatic control of power, wire feed, oscillation width, oscillation frequency, laser frequency, PWM, hot start, etc. depending on the material, material thickness and filler material diameter.
- ▶ High-resolution, easy-to-read displays ensure maximum ease of use even from a distance
- ▶ Maximum penetration depth of up to 6 mm thanks to 20 nm single-mode laser and specially developed wobble technology
- ▶ **2 in 1 machine: Welding, cleaning**
- ▶ Perfect cleaning with up to 100 mm scan width and autofocus:
 - ▶ Ideal for derusting, paint stripping and cleaning workpieces
 - ▶ Optimal for scale removal
 - ▶ Autofocus means there is no need to maintain a fixed distance

CRAFT-LASER 2000 WS:

Water-cooled, handheld laser welding device is built for heavy-duty applications and the highest demands. Maximum focus stability at 100% duty cycle guarantees maximum process reliability.

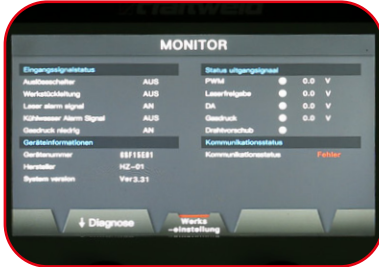
- ▶ Water-cooled 2000W - 20nm single-mode laser source with 100% duty cycle
- ▶ The specially developed water-cooled laser gun and improved optical systems guarantee maximum focus stability.
- ▶ **Programme selection via laser gun possible**
- ▶ High-performance water cooling from the laser cutting area guarantees maximum process reliability.
- ▶ **2-in-1 machine: Welding and cleaning**
 - ▶ Laser cleaning is ideal for paint removal, rust removal and other types of removal.
 - ▶ Optional Ethernet-IP interface for robot applications
 - ▶ **Optional: Double wire feed**

SECURITY:

- ▶ 2-channel emergency stop system
- ▶ 2-channel safety interface for access monitoring (door contact switch)
- ▶ Key switch to prevent unauthorised use
- ▶ 2-channel fibre breakage detection and monitored QBH connection
- ▶ Safety instructions and manual activation of the laser release at each start
- ▶ Double push-button prevents unintentional activation of the laser emission

SIMPLE SERVICE:

- ▶ Replaceable burner and hosepack
- ▶ Laser cell can be replaced using swap procedure
- ▶ Interchangeable circuit boards and displays
- ▶ Laser centre offset can be corrected in the control system without calibration
- ▶ System can be upgraded and updated



DISPLAY

› In German and English



WIRE FEED CASE

› Precise wire feed with 4 rollers



Craft-Laser 1500 S



HOSE PACKAGE

- › Double-sheathed hosepack and covered with additional leather protection - maximum robustness against cable breakage, wear and damage to the fibre conductor
- › Temperature stable, no problems even with aluminium despite back radiation
- › Stable wire feed, guided independently of the focus tube, ensures maximum feeding and process reliability



OPTIONAL TROLLEY

› suitable for Craft Laser 1500 S

! DISCOVER THE NEW CRAFT-LASER 2000 WS ON THE NEXT PAGE!

MIG/MAG

TIG inverter

Electrode inverter

Laser welding

Plasma cutters

Electrochemical processing

Welding accessories

Craft-Laser 800 / 1500 S / 2000 WS – Laser welding machines

Hand-held laser welding machines are the **newest revolution** in welding technology and have unbeatable advantages in the thin sheet metal sector compared to the previous conventional welding process.



HANDY WELDING GUN

- › Very light and handy
- › Ergonomic handle shell
- › Rubberised handle ensures comfortable handling and insulation against workpiece conduction, long service life and scratch resistance
- › Easy replacement of the lenses if required. These are located under the flap in the gun and can be replaced without tools.
- › Protected from dirt by cover flap - protective glass and focus lenses can be replaced

SCOPE OF DELIVERY

	800	1500 S	2000 S
Welding gun	x	x	x
Gas hose 4 m	x	x	x
5 protective glasses for laser welding gun	x	x	x
2 conveyor rollers 0.8 / 1.0 V-groove	x	x	x
2 conveyor rollers 1.0 / 1.2 V-groove	x	x	x
2 conveyor rollers 1.2 / 1.6 V-groove		x	x
2 conveyor rollers 0.8 / 1.0 U-groove	x	x	x
2 conveyor rollers 1.0 / 1.2 U-groove	x	x	x
2 conveyor rollers 1.2 / 1.6 U-groove		x	x
3 nozzles AS-12 for laser welding gun		x	x
3 nozzles ES-12 for laser welding gun		x	x
3 nozzles DS-16 for laser welding gun	x		x
3 nozzles BS-16 for laser welding gun		x	x
3 cutting nozzles	x	x	x
Laser cleaning accessories	x	x	x
Filter pressure regulator 1/4" 16 bar	x	x	x
Plug nipple 1/4" external thread	x	x	x
Double nipple G 1/4" x G 1/4"	x	x	x
Faceshield FS 1 (golden visor)	x		
VarioProtect LASER-M laser welding helmet		x	x



WEAR PARTS SET

- › included with Craft Laser 800, 1500 S, and 2000 WS



Craft-Laser 800

MODEL DESIGNATION

	CRAFT-LASER 800	CRAFT-LASER 1500 S	CRAFT-LASER 2000WS
Article no.	1390008	1390015.2	1390020

WELDABLE MATERIAL THICKNESS

Weldable material thickness Steel	0.8 – 3.0 mm	0.8 – 6.0 mm	0.8 – 8.0 mm
Weldable material thickness Stainless steel	0.8 – 3.0 mm	0.8 – 6.0 mm	0.8 – 8.0 mm
Weldable material thickness Aluminium	0.8 – 2.0 mm	0.8 – 4.0 mm	0.8 – 7.0 mm

WIRE FEED

Weldable wires, steel	0.8 – 1.2 mm	0.6 – 1.6 mm	0.6 – 1.6 mm
Weldable wires, stainless steel	0.6 – 1.2 mm	0.6 – 1.6 mm	0.6 – 1.6 mm
Weldable wires, aluminium	1.0 – 1.2 mm	1.0 – 1.6 mm	1.0 – 1.6 mm
Wire feed unit	4 rolls	4 rolls	4 rolls
Wire feed speed	0.25 – 6 m/min	0.25 – 6 m/min	0.25 – 6 m/min

LASER

Wobble	0 – 5.0 mm	0 – 5.0 mm	0 – 5.0 mm
Wavelength of the radiation	1070 nm	1075 nm	1080 nm
Spectral width	3 – 4 nm	3 – 4 nm	3 – 4 nm
Power of the red guide laser	200 µW	200 µW	200 µW
Type	Single mode	Single mode	Single mode

ELECTRICAL CONNECTION

Connection cable length	5.0 m	5.0 m	10.0 m
Input power	3.0 kW	5.9 kW	7.5 kW
Laser power	800 W	1500 W	2000 W

COOLING

Cooling type	Air-cooled	Air-cooled	water-cooled
--------------	------------	------------	--------------

STANDARDS AND APPROVALS

Protection class	IP21S	IP21S	IP21S
WPS	✓		✓

ELECTRICAL DATA

Connection voltage	230V	230 V – 32 A CEE	230 V – 32 A CEE
Mains frequency	50 Hz	50 Hz	50 Hz

DIMENSIONS AND WEIGHTS

Dimensions (L x W x H) approx.	680 x 360 x 680	750 x 600 x 1000 mm	960 x 600 x 1000 mm
Weight of wire feed case	–	11.5 kg	11.5 kg
Weight approx.	38 kg	53 kg	150 kg

Laser protection cabin 3850 x 3900 x 2500 mm / 4000 x 4050 x 3000 mm / 6125 x 4050 x 3000 mm

- ▶ Made from powder-coated sheet steel (RAL 7035)
- ▶ Self-supporting, stable construction for long-lasting use
- ▶ Manufactured in modular design - simple and quick assembly
- ▶ Compatible with hand-held and stationary laser welding machines
- ▶ Effective heat dissipation from the laser welding cabin prevents overheating
- ▶ Large, smooth-running sliding door requires no swivelling range

- ▶ Increased productivity thanks to the ability to store raw and finished parts in the cabin

Model 4000 x 4050 x 3000 mm & Model 6125 x 4050 x 3000 mm

- ▶ Better material flow, as the cabins can be accessed with pallet trucks, trolleys and even smaller forklifts



Made in Germany



3850 x 3900 x 2500 mm



4000 x 4050 x 3000 mm



6125 x 4050 x 3000 mm

Incl. safety package incl. complete CE for Craft-Laser 800 / 1500S

Security package contains the following components:

- ▶ Switch cabinet with discrete PILZ safety relay for monitoring the protective circuits
- ▶ Contactless door contact switches from PILZ
- ▶ External emergency stop
- ▶ Internal emergency stop
- ▶ Laser warning light

Would you like advice?

Your local specialist dealer will be happy to advise you on all matters. We would be happy to advise you on this topic and refer you to a specialist dealer in your area.



Tim Bülles
Contact: +49(0)951 96555 425

YOUR PERSONALISED PRICE AND special sizes on request!

Accessories	Art. no.
Extraction package for laser safety cabin 1 - 3	1392050

Model		3850 x 3900 x 2500 mm	4000 x 4050 x 3000 mm	6125 x 4050 x 3000 mm
Article no.		1392000	1392005	1392010
Dimensions (L x W x H) approx.	mm	3850 x 3900 x 2500	4000 x 4050 x 3000	6125 x 4050 x 3000
Transport surcharge ²⁾		TVZSLASER	TVZSLASER	TVZSLASER

VarioProtect LASER-M / LASER-M AIR TH3 – Laser welding helmet specially developed for laser welding and cutting applications – also suitable for conventional welding processes

- ▶ Laser lens with variable tinting offers complete protection from direct laser exposure as well as from reflection, scattering, diffraction and divergence of the laser beam
- ▶ Developed for EN207 OD10 @ 1064nm
- ▶ Provides comprehensive protection to prevent

- eye burns, retinal damage and other tissue damage
- ▶ Ultra-clear vision - exceptional clarity and detail with Light State 2.0 laser lens with variable tinting
- ▶ Intelligent adjustment - number of colours,

- delay and sensitivity can be easily adjusted via user-friendly control panel with LED indicators
- ▶ Respiratory protection with a total filtration efficiency of >99.997%



VarioProtect LASER-M



MIG/MAG

TIG inverter

Electrode inverter



Laser welding



Plasma cutters



VarioProtect LASER-M AIR TH3

Electrochemical processing

Model		VarioProtect LASER-M VarioProtect LASER-M AIR TH3
Article number		1657060 / 1657065
Working temperature	°C	-10 – +55
Storage temperature	°C	-20 – +70
Response timelight/dark	ms	1 / 25000s
UV/IR protection		DIN 16
Light level		2.0
Dark protection level		DIN 4-8/8-12
Solar cells		Yes
Viewing window (W x H)	mm	96 x 46.5
Cassette (L x B x H)	mm	110 x 90 x 9
Sensors		2
Laser protection		1000-1100 D LB7 + IR LB8
Optical density		1000-1100 OD8
Special modes		GRIND / CUT / MIX / DARK
Dimensions (L x W x H) approx.	mm	270 x 230 x 215
Weight approx.	kg	0.87

Intelligent setting

- The number of colours, delay and sensitivity can be easily adjusted via a user-friendly control panel with LED displays

Scope of delivery

- ▶ TH3 fresh air supply incl. hose

Accessories	Art. no.	€ plus VAT
Outer attachment disc (PU 10 pcs.)	1663050	19.90
Inner attachment disc (PU 10 pcs.)	1663051	15.00
Headband	1663052	26.50
Forehead sweatband	1663053	2.50
Welding helmet housing	1663054	145.00
Filter cassette	1663055	459.00
Lithium battery 3V CR2450	1662034	459.00

Welding accessories

Face Shield FS 1 –

The safe and comfortable complete solution for eyes and face during hand-held laser welding



- ▶ The Face Shield (FS1) offers certified laser protection in accordance with EN 207
- ▶ New standards in wearing comfort
- ▶ only 386 g total weight
- ▶ Perfectly balanced thanks to an ingenious folding mechanism with spring-loaded coupling rods
- ▶ Height and width-adjustable headrest with Uvex Spiderneck neck support for perfect ergonomic relief

uvex | laservision

Model		FS 1 (golden visor)	FS 1 (blue-grey visor)
Art. no.		1872015	1872020
Standards		EN 166, EN 207 full protection	EN 166, EN 169, EN 207 full protection, EN 208 adjustment protection
Coating		Scratch-resistant outside / anti-fog inside	Scratch-resistant outside / anti-fog inside
Filters			
Colour view		Good	Outstanding
Version		FS1	FS1
Filters		P1P18	P1P22
Filter thickness approx.	mm	2	2
Filter colour		Gold	Blue-grey
Filter material		Plastic	Plastic
Filter technology		Absorption filter	Absorption filter
Visual brightness		very good	Sufficient
Protected area		Infrared, near infrared, ultra-violet	Infrared, near Infrared, visible, ultraviolet
VLT approx.	%	47	12
Protection level		M	M
Weight approx.	g	386	386



Laser safety goggles LSB 1 - Large field of vision without compromising protection

- ▶ Ergonomic design and adjustable temples for every head shape
- ▶ Flat temples for wearing under safety helmets
- ▶ Lightweight construction for a comfortable fit
- ▶ Thanks to the special anti-fog coating, visibility remains clear even in high humidity and changing temperature conditions



Technical data		LSB 1
Art. no.		1872050
Protection of the wavelength	nm	200-450 / 630-660 / 800-1100
Material		TR90 frame, PC filter
Permeability	%	18
Optical density		200 - 450nm OD 4+ 630 - 660nm OD 4+ 800 - 1.100nm OD 6+
LB protection level		316 - 440nm D LB5 + IR LB6 440 - 450nm DIR LB4 630 - 660nm DIR LB4 800 - 1080nm DIR LB6 LP S CE
Dimensions (L x W x H) approx.	mm	161 x 156 x 49
Weight approx.	g	40.2

Scope of delivery

