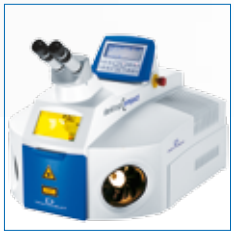
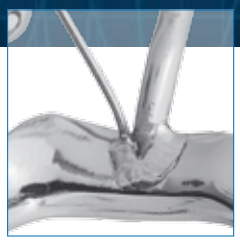
MORE THAN 15 YEARS OF LASER WELDING EXPERIENCE

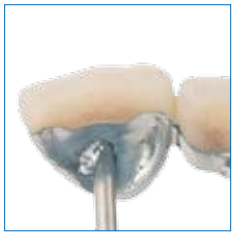


Dentaurum
Laser Welding Technology
high tech for all dental laboratories

DENTAURUM

LASER WELDING! The premium join





Fast, effective joining

Considerable savings in time and money

Laser welding is up to 80 % faster than conventional soldering. Remakes and repairs are much easier, faster and better.

Maximum stability

A plus in quality and reliability for dentists and patients

Unlike soldering, laser welding produces a very homogeneous structure of the same material. This is why these joints withstand higher mechanical loading and are more durable. An important benefit for your clients.

Extraordinary precision of fit

Perfect fit right from the very beginning

Laser welded structures are far more precise than soldered structures.

ing technique.

Wide range of applications

A perfect economic of investment

No matter whether repairs (e.g. fractured clasp) or complex new constructions (e.g. complex superstructures) are required, laser welding is faster and of a better quality.

Excellent biocompatibility

Extra safety for dentists and patients

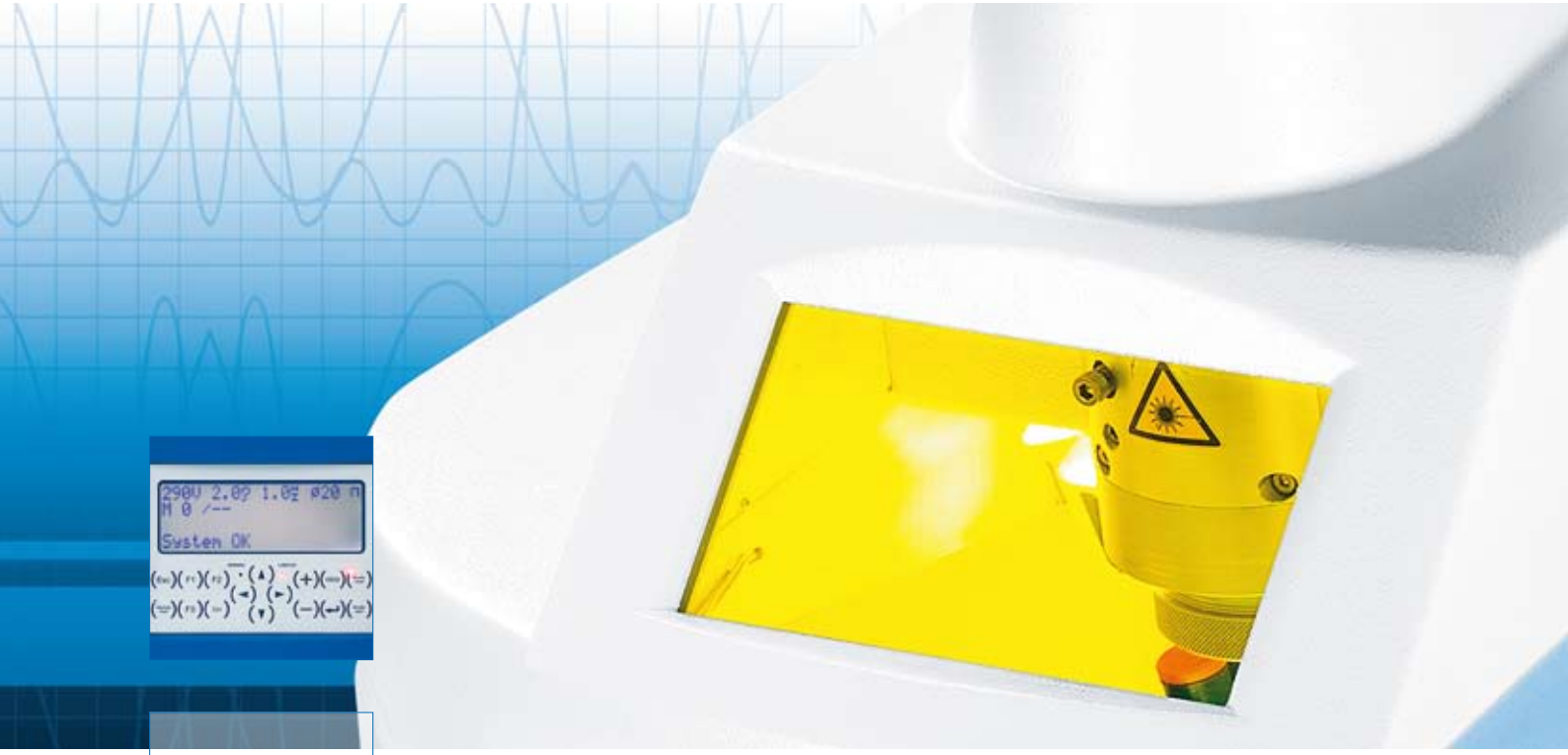
Working without solder, which is very prone to corrosion, makes laser welded constructions so practical. Laser welding technology now enables each laboratory to avoid this serious weak point in classic joining techniques – to benefit patients.

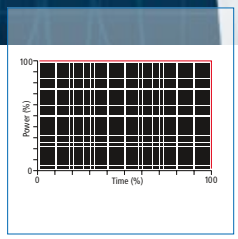
Simple operating logic

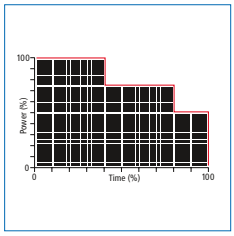
Work quick and safe

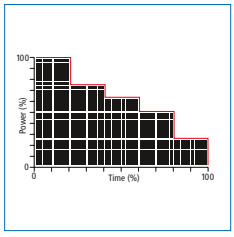
This applies to every operator from beginners to experienced laser users: the operating logic is easy to use for all laser settings.

LASER WELDING! State-of-the-art.









Pulse shaping

Gentle to the material

Dentaurum dental lasers were the first to use this technology which includes programmed, timed modulation of the laser impulse, matched to the material. This allows you to work faster and better as well as avoiding cracks and stress. All this facts has been scientifically proven several times.

The settings

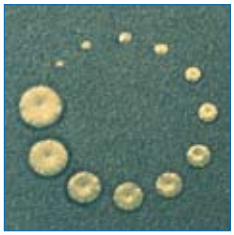
Computeraided – safe and convenient

To work perfectly, a whole series of settings have to be programmed, e.g. voltage, focus, pulse duration and frequency. The more precisely the settings are matched to the material and welding job, the better the result.

Wide range of custom and memorizable settings

No restrictions – more success

For perfectionists or very special jobs as many settings as possible should be freely adjustable and storable.



Very high welding energy

Unique deep penetration welding

Only a laser easily welds to depths of up to 3 mm. Other welding methods are limited to a maximum of 0.6 mm.

Very high precision

Even the most slender parts can be welded with the utmost precision

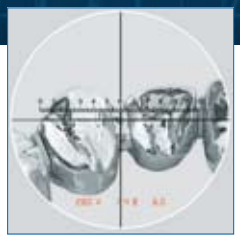
A laser can also dose the energy very accurately to spot-weld very thin structures (even less than 0.2 mm thick). Other methods cannot cope with this, which virtually excludes applications such as extending crown margins.

Rapid welding

Exact welding lines with up to 25 pulses per second

Most welding jobs can be carried out in a fraction of the time required by other methods.

LASER WELDING? Dentaurum !



Lasers produce the tiniest spot-welds

Perfect welds even where inadequate space is available

Welds can be placed in narrow interdental spaces (even close to porcelain) with a laser. This is not possible with other methods (minimum diameter of a laser spot-weld: approx. 0.3 mm, other methods: approx. 1.5 mm).

Variable focus

For a wide range of applications

The diameter of the laser focal point is infinitely adjustable between 0.2 mm and 2.0 mm. This covers the entire range of welding required for dental technology – from slender restorations to smoothing larger areas.

Powerful light optics and bright working chamber

Work relaxed and safely

The microscope with high grade optics ensures a large and well illuminated visual field. The large depth of focus in the working area simplifies precise and reliable welding.

The longest experience with dental lasers

Highly competent and safe – for your benefit

Dentaurum was the first to launch laser welding technology for dental technology on a worldwide basis.

1993 DL 2000	1995 DL 2002	1996 desktop Laser	1997 Com-4-Laser
2000 DL 3000	2003 desktop Power Laser	2004 desktop Compact	2009 desktop Compact II

Competent hotline

Immediate telephone assistance

Really great: proud owners of a Dentaurum laser can rely completely on our team of experts for all matters regarding dental technology and all types of laser welding technology. We would be pleased to help you.

All-round customer care

All about laser welding – right – from the beginning and non-stop

As soon as the unit is installed on your premises, our technician will brief you so that you can start welding right away and make better use of the beginner's course later on.

desktop Compact

Laser welding – powerful yet manageable

Characteristics

15 years of experience in dental laser welding included in a compact table top unit. From delicate, detailed welding to secure joint welding, even on solid, sturdy framework, the desktop Compact laser can be used for all areas of application in dental prosthetics and orthodontics. The finely adjustable dosage makes welding much easier. Until now, such compact machine measurements were not available in this laser performance category. Simple machine operation prevents drowsiness at work.

Product assets

- extremely compact table top unit
- high output reserve
- ergonomically designed – large working chamber with inclining laser axis
- high quality microscope with a wide field of vision
- integrated pulse forming – 4 pre-set pulse shapes
- two inert gas nozzles, 1 x flexible and 1 x fixed retractable
- large pulse adjustment range – easy operation using joysticks
- integrated extraction and cool air nozzle

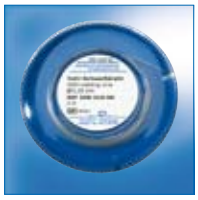
Technical Data

desktop Compact	090-578-00
Maximum power	50 W
Pulse energy	50 J
Peak pulse output	5 kW
Pulse duration	0.5 – 20 ms
Pulse frequency	Single pulse – 25 Hz
Welding spot diameter	0.2 – 2.0 mm, Infinitely variable motorised adjustment
Settings storage	39
Pulse forming	4 pre-set pulse shapes
Argon flushing	1x flexible, 1x fixed
Air nozzle	Cool air nozzle integrated within the welding chamber
Extraction	Integrated with suspended particle filter
Mikroscope	Stereo microscope with 16x magnification
Illumination	2 x 20 W Halogen
Dimensions (W x H x D)	510 x 430 x 645 mm
Weight	50 kg
Mains connection	230 V / 10 A / 50 / 60 Hz
Recommended table height	0.7 – 0.75 m

Optional

Argon fittings	Incl. flow indicator	**REF 090-404-00**
Stand, height adjustable	Min. working height 740 mm Max. working height 1090 mm Motorised adjustment	**REF 090-574-00**
Maintenance and customer service contract	Annual maintenance by Dentaurum	**REF 099-400-00**
Laser safety and technical instruction	At our site in Ispringen or on location	

Laser welding – accessories



CE 0483

CoCr laser welding wire

Perfect dimensions for use when laser welding all CoCr alloys. Delustered surface for enhanced energy absorption.

ø 0.35 mm and 0.5 mm, 2 m coil

CE 0483

NiCr laser welding wire

For laser welding NiCr based alloys. Specifically for high grade alloys such as remanium® CS, CSe and G-soft.

ø 0.5 mm, 2 m coil

CE 0483

Pure titanium wire – Grade 1

according to DIN 17850. For laser welding.

7 shapes:

round: coils or rods
rolled: rods

Welding wires

The constituents within the welding wires are the same as the relevant Dent Aurum alloy – one step further in the quest towards reducing the amount of metals in the patient's mouth to a minimum.

rematitan® attachments

T-Attachment. Easy to activate or replace. Comes in 90° or 36°. Intracoronal retentive element which can be stress free welded into the cavity of the crown by means of a laser. Both versions also available as burnout plastic preformed females.

- prepared for laser welding

Matrix Sizes:

Height 5.4 mm
Width 2.8 mm
Depth 1.6 mm

CE 0483

rematitan® bars

rematitan® bars have the same cross-section as precious alloy bars. All respective auxiliary parts can be used.

Each package includes:

1 Bar hinge or 1 bar attachment
1 Bar sleeve + 1 Retention

Adjustable focusing device for the laser welder and testing plates

This holder is a device for the perfect adjustment of the crosshair of dental laser welders. The testing plate is clamped into the adjustable holder. The height is then perfectly adjusted in the welding chamber. As soon as the testing plate is visible in the microscope, the laser beam is aimed at the testing plate and the crosshair can be aligned with that particular point.

Paralas

Device for parallel alignment of attachments for the laser welding technique.

Parallel holders for bars are included.

Parallel holders for bars

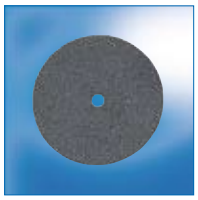
Available in 2 designs for bar hinges: micro (1.6 mm) and macro (2.1 mm).

Conical pins

Preform in Wax.

Accessory which allows for optimum results when laser welding gold to CoCr alloys.

For easier laser welding, the stub is affixed to the secondary crown.



TX-Flex Separating disc

Thickness 0.15 mm, ø 22 mm, 25 pieces.
Extremely thin.

Maximum cutting efficiency – for porcelain, CoCr and gold.
Max. no. of revolutions 25000 min^{-1}.

Supercut STM Separating disc

Maximum cutting efficiency, minimal breakage risk, excellent strength.

Nylon reinforced quality.
Max. no. of revolutions 35000 min^{-1}.

L.O.M.
LASER
OPTIMIZED MATERIAL

These products and Order numbers can be found in the updated Prosthetics catalog.

Additional information regarding Dentaurum products can be found in the internet.

www.dentaurum.de

Date of information: 09/09

Subject to modifications

989-357-20 Printed by Dentaurum Germany 09/09/B/R1-2

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