



CADdent®

Multiple solutions



LASERMELTING



LASERMELTING

ADDITIVE IS INNOVATIVE

WWW.CADDENT.EU



LaserMelting - what is it?

LaserMelting is the digital successor to traditional laboratory manufacturing methods such as modeling and casting. LaserMelting is an additive manufacturing process and therefore a type of 3D-printing that converts three-dimensional design data by dividing them into individual layers or levels.

These level contours are transmitted to the laser system. There, the powdery starting material (cobalt-chrome, titanium or gold) is first applied in a very fine layer of approx. 25 μ to a building platform.

At this point laser beam melts the powder according to the design contour. After cooling, the platform is lowered by one layer thickness and the next fine powder layer is applied. This process is repeated until the entire construction is made up of the finest metal layers.

The metal structure created in this way is unbeatable in its homogeneity and precision. Such a product can hardly be produced in an analogical way.



LASERMELTING

Experience, Quality and Precision

We are among the pioneers in selective laser melting (SLM) - a process that we just call LaserMelting. As a leading provider, we supply customers all over Europe with basic prosthetic products up to complex structures in orthodontics.

Our LaserMelting process implements any digitally created 3D design in cobalt-chrome (CoCr), titanium or gold with high precision and sets standards in terms of precision and filigree.

Large spans such as 16-unit restorations can also be easily implemented in LaserMelting. We have adapted the laser process so extensively to the requirements of dental technology that we achieve the highest level of fit - and with the fastest delivery times.

For LaserMelting we only use the highest quality branded materials with very specific advantages.



THE ADVANTAGES OF LASERMELTING

- ✓ EXCELLENT FIT
- ✓ ANY DESIGN CAN BE IMPLEMENTED
- ✓ REPRODUCIBLE AT ANY TIME
- ✓ ABSOLUTE HOMOGENEITY
- ✓ METAL STRUCTURE IS LIKE ROLLED ALLOYS
- ✓ GAINING SPACE BY ELIMINATING THE CUTTER RADIUS CORRECTION
- ✓ HOLLOW SHAPES AND „DIGITAL SCRAPING“ FOR SIGNIFICANT WEIGHT SAVINGS
- ✓ FREEDOM FROM MILLING SHADOWS AND NARROW INTERDENTAL SPACES
- ✓ ACCUSTOMED PROCESSING
- ✓ ENVIRONMENTAL FRIENDLINESS THROUGH OPTIMAL USE OF MATERIALS
- ✓ TIME SAVINGS FOR LUCRATIVE WORK, ANALOG PROCESSES ARE ELIMINATED
- ✓ FAST PRODUCTION AND SHORT DELIVERY TIMES
- ✓ TOP PRICE-PERFORMANCE RATIO

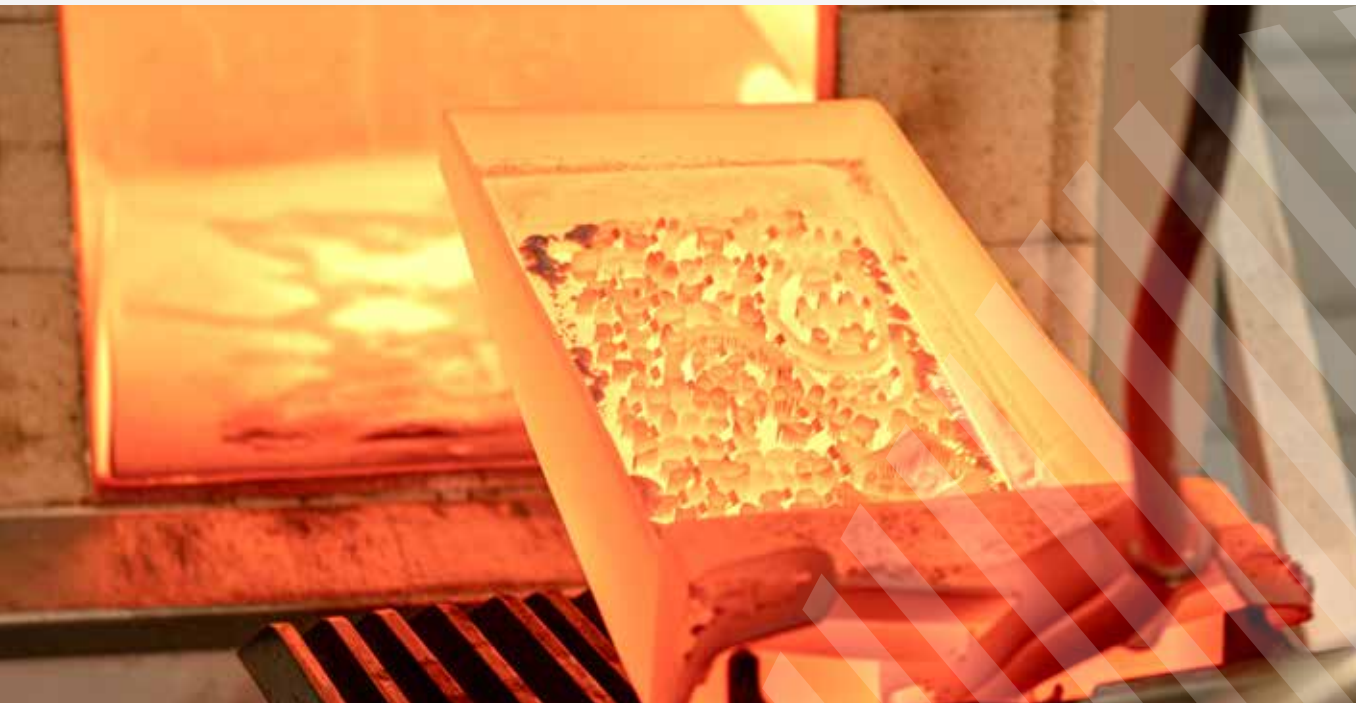


LASERMELTING

Why LaserMelting from CADdent?

Laboratory managers and owners must always keep an eye on the economic side in addition to the demands on quality and aesthetics. This triad of requirements can be mastered better with the support

of CADdent, because it is usually time-consuming preparatory work that costs time, ties up staff and is modestly remunerated.



1. CADdent helps to reduce fixed costs

Why buy a cow when you only have a glass Milk want? In-house machines mean high investments that have long-term effects as fixed costs for acquisition / depreciation or leasing rates. There are

also maintenance, repair, energy costs and training. CADdent enables the immediate, comprehensive use of the latest technology - to the extent that you need, when you need it.

2. Efficiency and added value increase

CADdent, just as an extended workbench, enables laboratories to concentrate on their real strengths again: creating customized, high-quality prosthetics with their own signature. Work steps that are time-consuming or require personnel that can

hardly be found are outsourced to CADdent. The result: your working time is used more efficiently because it flows into high-quality, appropriately remunerated products.

3. All options are available

Technical developments in connection with the different personal preferences of the practitioners require an ever wider range of available materials. Own production equipment also requires laboratories to keep these - usually expensive - branded materials available.

CADdent is a partner who can always offer this variety in the most current versions due to high production quantities. A competitive advantage that costs you nothing.



LASERMELTING



Cobalt-chrome (CoCr) - for all indications

Our branded material **remanium® star**

- is carbon-free and therefore ideal for LaserMelting
- is characterized by a very good adhesive bond between the framework and the ceramic due to its low coefficient of thermal expansion
- is nickel and beryllium free

Indications	Crown	Inlay / Onlay / Veneer	Bridge up to 16 units	Primary telescopic	Secondary telescopic
Basic Cobalt-chrome (CoCr)	✓	-	-	-	-
Cobalt-chrome (CoCr)	✓	✓	✓	✓	✓
Titanium	✓	✓	✓	✓	✓



Titanium - allergy free and versatile

Our branded material **rematitan® CL**

- has the best biocompatibility of all metallic materials
- offers a very good adhesive bond between the framework and the ceramic due to the lower alpha case
- allows more delicate constructions than would be possible using conventional technology

Superstructure on implants	Bar	Tertiary structure	Partial framework	Orthodontic appliance	Abutment
-	-	-	-	-	-
✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓



LASERMELTING

Unique worldwide: LaserMelting in gold

Our self-developed process makes us the only provider of LaserMelting in **CADgold84** (Herador S) worldwide.

So you can also use the excellent material properties of gold in the digital workflow. Due to the complete melting of the individual layers of material, an absolutely homogeneous metal structure is created - thoroughly without the previous steps of casting technology such as modeling, embedding, casting, divesting etc.



Gold fascinates and adorns!
You design your piece of jewellery,
we make your ideas come true in
rapid prototyping.

THE ADVANTAGES

- ✓ MATERIAL SAVINGS THROUGH „DIGITAL SCRAPING“
- ✓ ABSOLUTELY HOMOGENEOUS METAL STRUCTURE
- ✓ FILIGREE DESIGN
- ✓ THE PROCESS INVOLVES LITTLE FILING
- ✓ REUSABLE MATERIAL
- ✓ NO STORAGE



Our high gold content, light yellow ceramic alloy CADgold 84 (Herador S)

- is beryllium, cadmium, lead and nickel free
- is biocompatible since no toxic substances for cells are released
- offers a very good bond between framework and ceramic

Indications	Crown	Inlay / Onlay / Veneer	Bridge up to 16 units	Primary telescopic
Gold	✓	-	✓	✓



Delivery options

The frameworks, crowns and bridges etc. that we produce using LaserMelting are available in different delivery options. This means that we give you the choice of how far the product should be processed by us.

Depending on your preferences, employee skills, deadlines and to suit your individual workflow, you can decide between **supports** that have been **grinded** (A), **supports** that have **not** been

grinded (B) or frameworks up to two splinted crowns **with supports** (C). Our possible surface treatment saves you time, but it is made in such a way that the finishing touch always takes place in your laboratory.

In any case, with CADdent you benefit from an excellent price / performance ratio.

(A)



(B)



(C)



Orthodontics - precise basis of the best therapy

We have been manufacturing passionately special products for use in the orthodontic sector for a long time - e.g. to correct abnormal occlusion or misaligned teeth.

Recognized appliances such as palatal expanders, Herbst hinges (as a semi-finished product) or retainers are integrated into constructions that can only be manufactured with such precision using LaserMelting.

The process also allows the correction devices to be delivered in one piece, so that the laboratory can fit the functional elements exactly. The result impresses with its perfect fit, flexibility and the best possible comfort.





LASERMELTING

Partial Frameworks - outsourcing without compromising



This prosthesis base is very complex to manufacture in the conventional way and requires the know-how of experienced technicians who are increasingly difficult to find. Partial framework à la CADdent is the quick, safe solution.

Laboratories all over Europe appreciate the quality of our structures. Our digital partial framework in LaserMelting made of cobalt-chrome (CoCr) and titanium for the upper and lower jaw is characterized by both a perfect fit and interesting conditions - regardless of the number of clasps.



Automated polishing - learn more about efficient workflows in your laboratory here.
<https://www.caddent.de/fr/blog/cadtools-machines-a-polir-gpainnova>



LaserMelting enables particularly filigree designs to be realized and a higher modulus of elasticity makes spring-hard clasps possible. The structures can be machined very well, on request we can also deliver them polished. We are happy to advise and support you during your first designs with tips and tricks.



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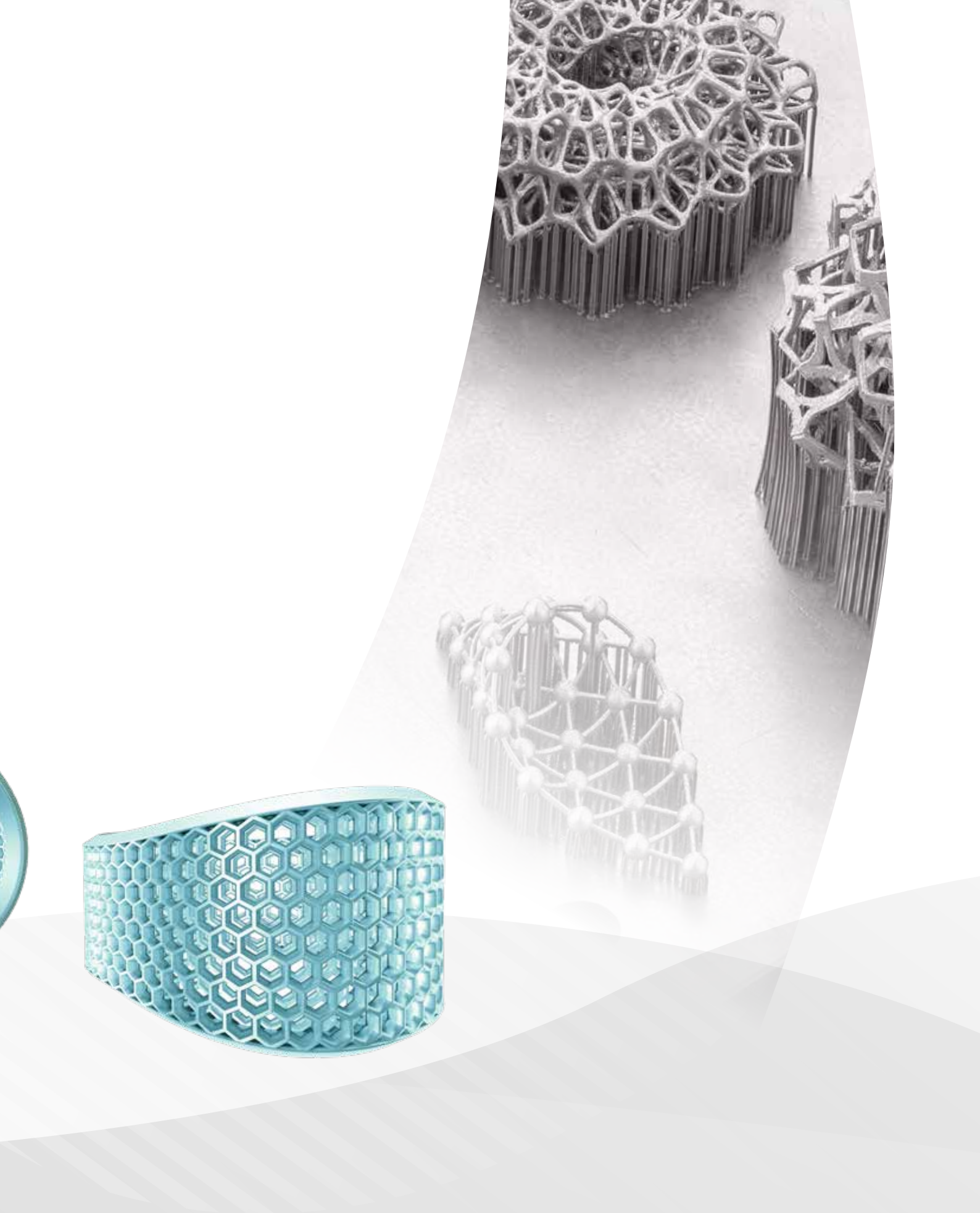
Rapid Prototyping - 3D is not just for dental purposes

Nothing replaces the haptic impression. Whatever you have in mind as a plan, drawing or idea - we make it three-dimensional and turn your projects and prototypes into reality. Our LaserMelting systems are also ideally suited for other products and shapes.

Can not find the piece of jewellery you imagine? From the design of your own idea we manufacture your personal one-off piece out of gold - or as a small series out of one of our other metals.

Your idea realized in rapid prototyping could not be more personal!







LASERMELTING

Service

At CADdent you have a number of extra services that can make your life easier. Our customer ser-

vice team will be happy to provide you with details and requirements at any time.

Standby

Time is money: You benefit from an unbeatable price and leave us an additional working day of production time.

OneDay

No-one else can hardly promise you something like that! If you choose the OneDay option and send in your data by 9:00 a.m., your order will be dispatched the same day.

Express Service LaserMelting

(Partial frameworks / Tertiary structure)

For urgent orders which arrive within the deadline and shall be dispatched the next working day.

Goodwill insurance

Insure your work against impression errors and inconvenience with this all-round carefree package: in the event of damage, we will produce the affected structure again.





Scan / Design service

Based on the model you send in, which we scan for you, or on the basis of the transmitted scan data (intraoral scan or model scan), our experienced CAD specialists create your desired design and implement it in the appropriate material.

File repair

On request, e.g. when the structure is not optimized for the LaserMelting production.

Guarantee

If a product does not meet our high quality standards in terms of material or processing errors, we will of course replace it free of charge.



Crown and bridge in CoCr, titanium, gold LaserMelting



Partial framework / tertiary structure and orthodontics in CoCr, titanium LaserMelting

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from technician to technician

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