

# GiganTium

**We know no commercially pure titanium  
stronger than GiganTium!**

## **GiganTium**

- ↳ Tensile strength  $\geq 1.100$  MPa
- ↳ 100 % pure titanium
- ↳ Exclusively for  
ICX-DIAMOND® Implants

## **Roxolid®**

- ↳ Tensile strength approx. 1,000 MPa
- ↳ Titanium-zirconium alloy
- ↳ Not 100% pure titanium

## **Titanium Grade IV KV**

- ↳ Tensile strength approx. 700 MPa
- ↳ Standard material for almost all  
implant systems worldwide



# GiganTium

medentis uses the exceptional strength and purity of GiganTium in its ICX Diamond implant system.

Exceptional strength and purity of GiganTium – for superior mechanical stability and safety.

But what exactly is behind the term "GiganTium"?



INTERVIEW WITH  
Alexander Scholz

**Many implantologists have heard of titanium purity grades, but do not know all the background information. What type of titanium is used in implantology?**

In implantology, commercially pure (CP) titanium grades specifically grade II to IV are primarily used. Grade IV cold-worked titanium has established itself as the premium standard because it offers the highest strength among the CP titanium grades and its proven biocompatibility.

Cold working and compaction significantly increase its stability compared to classic grade IV. Almost all implant systems available worldwide today are made of grade IV cold-worked titanium. Some manufacturers also use alloys, such as alloy of titanium and zirconium, to increase the strength. However, these materials are no longer pure titanium and raise questions about long-term biological compatibility.

**The ICX Diamond implant is made of GiganTium. What are the biggest advantages here?**

Standard CP Grade IV cold-worked titanium

has a tensile strength of approx. 700 MPa. Our new material GiganTium achieves not less than 1,100 MPa – around 30 percent more strength than CP Grade IV cold-worked titanium. This allows us to offer implantologists maximum safety, even with smaller implant diameters, and superior long-term stability for patients. And all this is without alloy additives but is made from 100 percent titanium.

**Can you also prove the superior results of the ICX Diamond implant? How is this tested?**

Yes, we have carried out static load tests. In these tests, the implants are loaded until they break. The result was very clear: ICX Diamond implants made of GiganTium achieve more than 20 percent higher breaking load values than implants made of Roxolid®. Roxolid® was previously considered the benchmark in the market at around 1,000 MPa – now, for the first time, we have a pure titanium that exceeds this mark. It must be emphasized here that these are static fracture tests (static strength), not standardized continuous load cycles (fati-

# GiganTium

gue strength) according to ISO standards. But even these data speak for themselves.

## How does GiganTium achieve this exceptional strength?

We consistently test the incoming titanium raw materials for strength. This reveals a wide spectrum: some batches are around 680 MPa, which corresponds to classic Grade IV titanium. Others reach values of 1,100 MPa or even significantly higher – up to 1,300 or 1,400 MPa. Only these elite batches of 1,100 MPa or higher are used to produce ICX-Diamond. This strict selection process is the basis for GiganTium – stronger than any known titanium, purer than any titanium alloy.

## What are the advantages of the ICX Diamond implant through the combination of GiganTium and a hydrophilic and micro-structured surface?

The combination of mechanical superiority and biological optimization is unique. GiganTium provides strength and safety, while our hydrophilic, micro-structured implant-surface enables faster osseointegration.

This means high primary stability and long-term safety – for practitioners and patients alike.

## Are you planning to use GiganTium technology in other ICX implant lines?

No – and that's entirely intentional. GiganTium is used exclusively for the Diamond line. The name Diamond stands for exceptional strength, safety, and precision – and that is exactly how it should remain.

**It is important to note that GiganTium is not a new or an untested material.** The technology was successfully introduced in 2023 and has since proven itself in thousands of implantations. Around 30% of all implants we deliver are now made of GiganTium. Feedback from practitioners has been consistently positive – both from a mechanical and biological perspective.

Since it is 100% pure titanium, there are no risks from alloy components such as zirconium, aluminum, or vanadium. GiganTium thus offers doctors and patients a maximally safe and proven solution.

The Diamond family made exclusively from GiganTium includes the Premium and Active variants, each available as Bone-Level and Transgingival, as well as all tuber and zygoma implants.

## Diamond thus remains a clear promise:

All Diamond implants are always made of GiganTium. ←

There is no stronger Ø3.3 implant known to us than

# ICX-DIAMOND<sup>®</sup>

THE HIGH-END IMPLANT BY MEDENTIS

LIQUID

**SPECIAL OFFER 2025:**

**ICX-DIAMOND<sup>®</sup> – made from GiganTium**

**Limited offer of max. 30 packages!**



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LIQUID

Titanium Grade	Tensile strength
Pure titanium grade 4 KV all ICX-premium implants <sup>1)</sup>	<b>843 MPa</b>
All <sup>A</sup> ICX-DIAMOND <sup>®</sup> implants are made of GigaTium <sup>2/3)</sup> GigaTium = pure titanium grade 4KV, with 1,100 MPa.	<b>≥ 1.100 MPa</b>

The tensile strength is the maximum mechanical tensile stress with which a sample can be loaded in a tensile test.

1) Average values of the batches used in 2012 for ICX Premium Implants. Data stored in files.

2) ICX-DIAMOND<sup>®</sup> Giga-Titanium values deposited in: medentis specification

3) Definition of Giga-Titanium: Pure Titanium Grade 4KV 1,100 MPa. Sources for mechanical and chemical properties: ISO 5832-2

A: medentis medical/ICX-DIAMOND<sup>®</sup> is a registered brand and/or trade mark of medentis medical GmbH, Walporzheim, GER. Data on file.



# ICX-DIAMOND<sup>®</sup>

THE HIGH-END IMPLANT BY MEDENTIS

**LIQUID**



## THE UNBELIEVABLE ICX-'25 OFFER!



### LIMITED OFFER OF MAX. 30 PACKAGES!

DELIVERY OF SCANNER/CHARGING STATION FROM 8 WEEKS AFTER ORDER DATE.  
PARTIAL DELIVERY OF IMPLANTS POSSIBLE EARLIER.



ICX Offers 2025		PACKAGE 1 <input type="checkbox"/> selection		PACKAGE 2 <input type="checkbox"/> selection	
	Retail price	number	Sales value	number	Sales value
Implants <b>ICX Diamond (€119)</b> incl. locking screw (€16.50)	135,50 €	<b>180</b> Freely selectable	24.390 €	<b>240</b> Freely selectable	32.520 €
ICX-P5 Intraoral Scanner	9.999 €	1	9.999 €	1	9.999 €
ICX-BAMBOO Mobile loading station	8.999 €	-	-	1	8.999 €
ICX-ALL-IN-ONE Boxes	2.990 €	1	2.990 €	2	5.980 €
	<b>LIST PRICE</b>	<b>37.379 €</b>		<b>57.498 €</b>	
	<b>CUSTOMER DISCOUNT</b>	<b>- 12.989 €</b>		<b>- 24.978 €</b>	
	<b>PRICE CUSTOMER</b>	<b>= 24.390 €</b> customer savings: 12.989 €		<b>= 32.500 €</b> customer savings: 24.978 €	
	<b>CUSTOMER SAVINGS (%)</b>	<b>= 34%</b>		<b>= 44%</b>	
		<input type="checkbox"/> Payment within 10 days - without deduction		<input type="checkbox"/> Payment within 10 days - without deduction	
		By SEPA direct debit <input type="checkbox"/> 6 months interest-free: 6 months x €4,065 <input type="checkbox"/> 24 months: 3.3% = 24 x approx. €1,051.55 <input type="checkbox"/> 36 months: 3.8% = 36 x approx. €717.92 <input type="checkbox"/> 48 months: 4.3% = 48 x approx. €553.58 All prices exclude statutory VAT.		By SEPA direct debit <input type="checkbox"/> 6 months interest-free: 6 months x €5,420 <input type="checkbox"/> 24 months: 3.3% = 24 x approx. €1,359.38 <input type="checkbox"/> 36 months: 3.8% = 36 x approx. €928.09 <input type="checkbox"/> 48 months: 4.3% = 48 x approx. €716.15 All prices exclude statutory VAT.	

Offers are valid until further notice. Delivery of scanner/charging station from 8 weeks after order date. Partial delivery of implants possible earlier.

Name .....

Customer-No. ....

Date, signature .....

All prices are in euros plus statutory VAT, until further notice (as of 1 June 2025).

Practice stamp

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