

ALWAYS IN THE FAST LANE

Yesterday. Today. Tomorrow.
Wironit®. WIRONIUM®. WIRONIUM® RP.



ALWAYS IN THE FAST LANE

Yesterday. Today. Tomorrow.
Wironit®. WIRONIUM®. WIRONIUM® RP.



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THE PARTIAL DENTURE TECHNIQUE ACCORDING
TO THE BEGO SYSTEM HAS BEEN PROVIDING MATERIALS, DEVICES,
AND EXPERTISE FOR DECADES. IT MEETS THE HIGHEST STANDARDS
FOR IDEAL, SAFE, AND PRECISE PATIENT CARE.

”
JÖRG FASEL,
TEAM LEADER CAD/CAM PROSTHETICS,
CATEGORY MANAGEMENT BEGO COMPANY GROUP BREMEN

Dear Dental Technicians,

For decades, partial denture technique according to the BEGO system has stood for highest quality and reliability in the dental industry. We are proud today to be the market leader with our partial denture alloys, through the interplay and coordinated processes of materials, devices, and necessary know-how, meeting the high demands of the industry.

Many years of experience and continuous striving for innovation have made BEGO a trusted partner for dentists and dental technicians worldwide. The partial denture technique enables precise and consistent results that convince both patients and professionals.

Given the increasing time pressure, the rising shortage of skilled workers, and the necessity for quality and innovative process thinking in the laboratory sector, digital support for laboratories is becoming increasingly important. The ideal solution lies in the combination of analog and digital methods to realize efficiency improvements without quality losses. BEGO successfully combines both conventional technologies and digital workflow implementations under one roof.

Brand new is the in-house developed AI-based software solution **IDA** (Intelligent Design Assistant) for design verification of partial denture frameworks, which increases production security, minimizes adjustments, and draws on our wealth of experience as the world market leader in partial denture frameworks.

The success story of BEGO is proof that tradition and innovation can go hand in hand. With a clear focus on quality and customer satisfaction, BEGO will continue to be your partner for successful and precise partial denture framework technology in the coming years. We remain in the fast lane – together with you!

CONVINCE YOURSELF!



ALWAYS A STEP AHEAD

BEGO's partial denture technology Successfully in Use for Decades

The optimal alloy is the most essential part of high-quality removable partial denture frameworks. Benefit from our globally leading classic alloys, such as Wironit®, WIRONIUM® and WIRONIUM® RP, as SLM powder alloy, for conventionally and digitally manufactured partial denture frameworks, which are characterized above all by outstanding clasp elasticity, high fatigue resistance, and biocompatibility.

BEGO CASTING ALLOYS

The alloy used has a considerable influence on the quality of the partial denture. All BEGO partial denture alloys have proven their worth over decades of use across the globe.

Whichever alloy is used, they are all components of the BEGO system chain. The alloys in the **Wironit® group** possess mechanical characteristics which are also far superior to the requirements of the ISO 22674 standard. The alloys in the **WIRONIUM® group** are the premium alloys available from BEGO. Their high elongation limit and outstanding ductile yield produce frames capable of accepting high loads and with excellent ease of activation. Their homogeneous, smooth surface reduces plaque accumulation and thus protects the restoration from deposits.

All BEGO partial denture alloys can be processed with all common melting methods and casting systems in dental technology. The WIRONIUM® and Wironit® alloys are highly corrosion-resistant. Corresponding certificates confirm their biocompatibility.

BEGO NON-PRECIOUS ALLOY POWDERS

WIRONIUM® RP is a non-precious alloy powder specifically developed for the additive manufacturing of partial denture frameworks. Thanks to the proven foundation of partial denture frameworks used millions of times, WIRONIUM® RP offers exceptionally high product safety in the field of partial denture framework manufacturing and also meets the US standard ASTM F-75 for surgical implants.

The excellent flowability during production, high fatigue resistance, and ideal reproducibility result from the optimal round particle shape and homogeneous grain distribution. SLM-manufactured partial denture frameworks offer excellent clasp elasticity and a nearly pore-free, smooth texture, ensuring outstanding fit. Through this solution, patients in particular enjoy a high level of safety and a comfortable wearing experience, even in complex cases, leading to an improved quality of life.

Furthermore, the manufacturing process using laser melting technology allows for high cost-effectiveness and design freedom for dental laboratories, making frameworks made from WIRONIUM® RP an excellent product choice for dental patient care.

TIMELESS CLASSIC

Yesterday. Today. Tomorrow.

Wironit®



Wironit®, market leader of non-precious metal alloys, has been successful worldwide since 1953 and is the classic alloy for removable partial dentures. Wironit® is easy to process, quick and comfortable to polish and, thanks to its composition, ensures high strength of the partial dentures made from it, so that patients always receive dimensional stability, security, biocompatible and aesthetics as part of the restoration.

Another guarantee of success of the alloy is its high elongation at break, which allows the clasps to be activated safely and frequently. Be part of BEGO and use Wironit®, our most successful alloy for consistent, reproducible and best casting results of analog partial denture frameworks as part of an efficient workflow.



TEAM ANALOG

sponsored by
Wironit® & WIRONIUM®

THE SECOND GENERATION

Yesterday. Today. Tomorrow.

WIRONIUM®



Discover the superior quality of WIRONIUM® by BEGO, the ultimate choice for casting removable partial dentures. This premium cobalt-chromium alloy, successful worldwide since 1972, stands out for its exceptional strength and durability, ensuring long-lasting and reliable RPD frameworks. WIRONIUM® offers an optimal balance in framework stability and clasp ductility.

The high strength allows for detailed, highly precise frameworks, which provide unparalleled comfort for patients seeking both functionality and quality due to their low weight. With WIRONIUM®, material quality and precision come first: All alloys in the WIRONIUM® group enable the production of precise and exemplary frameworks. WIRONIUM® by BEGO is not only biocompatible, minimizing the risk of allergies, but it is also easy to polish, achieving a natural and aesthetically pleasing result.



JUMP TO THE NEXT LEVEL



“

SINCE THE 1990S, WE HAVE BEEN
FOCUSING ON THE UTILIZATION AND EXPANSION
OF INNOVATIVE CAD/CAM DIGITAL TECHNOLOGIES
IN DENTAL TECHNOLOGY AND DENTISTRY.
TODAY, WE ARE LEADERS IN THIS INNOVATIVE FIELD AND
ESPECIALLY IN PARTIAL DENTURE TECHNOLOGY.

THOMAS HUMEZ,
CHIEF TECHNOLOGY OFFICER (CTO), BEGO COMPANY GROUP BREMEN

”

Pioneer for over 20 years INNOVATIVE SLM TECHNOLOGY

The high-tech production center opened at the BEGO headquarters in Bremen (Germany) in 2011 is an example. In the early 2000s, BEGO started as a pioneer and the first company worldwide to commercially use the SLM process in the dental field. Today, state-of-the-art laser and milling technology is used in Bremen and near Lyon to manufacture partial denture frameworks using five different processes. We are proud to be Europe's largest owner-managed production center with numerous patents in this field.

We continue to strive for innovative system solutions and consistently develop these especially in the production of removable dentures. Our current data shows that 20 % of all partial denture framework fabrications in Germany are already carried out using a digital workflow – and this proportion is growing rapidly.



FROM SCAN TO THE FINAL PARTIAL DENTURE FRAMEWORK



Set standards

HIGH-TECH, PRECISION & EFFICIENCY

Selective Laser Melting (SLM) – The additive procedure for the manufacturing of partial denture frameworks

Co-invented and patented by BEGO, the SLM procedure offers unparalleled quality in the production of individual, complex metal frameworks. A laser is used to fuse the material together to form a virtually pore-free structure with the best material properties. The process guides a laser based on your CAD data. Based on the indication, the laser builds the framework layer by layer from the select metal powder (WIRONIUM® RP) in an additive process.

Intelligent Design Assistant (IDA) – AI-based design check of partial denture frameworks

IDA is our in-house developed, AI-based software for direct and secure design checks of partial denture frameworks. It helps customers to review and correct production-critical design features of their CAD models in just three steps before sending the data.

1. Data upload
2. Direct design check
3. Approval and production

Your Benefits

- Reduction of complexity
- Avoidance of delays due to design errors
- Designs meet the highest required standards

SHAPING THE FUTURE

Today. And Tomorrow.
WIRONIUM® RP



With WIRONIUM® RP, BEGO offers a cobalt-based dental alloy for the production of digitally manufactured partial denture frameworks. WIRONIUM® RP was developed based on the long-proven and market-leading BEGO casting alloy WIRONIUM® and optimized for the additive manufacturing process. Partial denture frameworks produced using the SLM process are characterized by very high clasp elasticity and a nearly pore-free, smooth structure, offering excellent fit accuracy due to a tailored heat treatment.

This solution provides patients with a high level of safety and a comfortable wearing experience, even in complex cases, leading to an improved quality of life. Additionally, WIRONIUM® RP, planned, designed, and manufactured using the CAD/CAM process, offers a high degree of design freedom and cost-effectiveness by refining and optimizing traditional workflows through digital processes.

Sustainability is achieved through more resource-efficient processes and lower costs compared to other manufacturing technologies, such as milling. Additionally, the produced partial denture frameworks are characterized by excellent polishing properties that are more than comparable to cast components.



STRONG TRIO

Today. And Tomorrow.

WIRONIUM® RP Complete

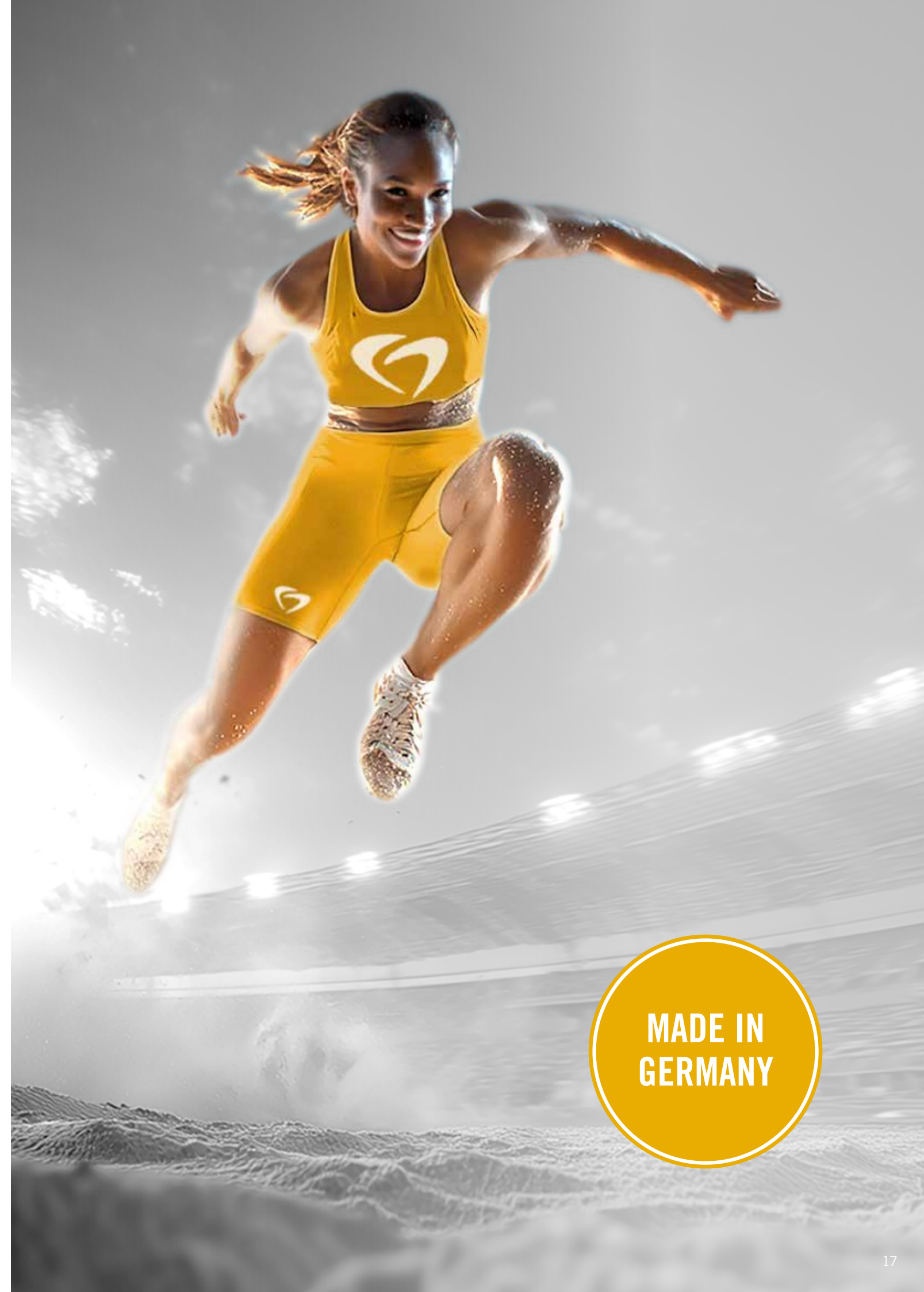


BEGO presents WIRONIUM® RP Complete, an innovative system for the next generation of digital partial denture production. The modular concept combines SLM-manufactured partial denture frameworks made from WIRONIUM® RP with 3D-printed prosthetic teeth and gingival components to create a precisely fitting restoration requiring minimal post-processing.

A key feature of the system is the newly developed retention and intelligent pin geometry, ensuring maximum stability and reproducible processes in the dental laboratory. Patients benefit from a secure mechanical interlock and a high level of wearing comfort. The frameworks for the upper and lower jaw are available either blasted or high-gloss polished and feature pore-free surfaces that facilitate easy cleaning and increase the longevity of the restorations.

Digital design is carried out entirely within the exocad PartialCAD App. The seamless workflow – from the framework and saddle components to the teeth – provides maximum flexibility and efficiency across all laboratory processes. Validated material combinations and the use of 3D high-impact base materials ensure the highest quality standards. The tooth-coloured hybrid material VarseoSmile® TriniQ® is used for the denture teeth, providing outstanding esthetics.

WIRONIUM® RP Complete stands for a fully digital, validated workflow in removable partial denture technology, actively shaping the future of dental technology with efficiency and innovation.



MADE IN
GERMANY

SHAPING THE FUTURE 2.0

Today. And Tomorrow.

WIRONIUM® RP Hybrid

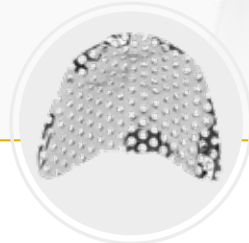


With hybrid manufacturing, a combination of SLM technology and high-precision milling technology, as well as the material WIRONIUM® RP, BEGO is technologically taking the production of dental prosthetics to a new level. Through a digital workflow, it creates possibilities to manufacture complex components in one piece easily, precisely, efficiently, and with high quality.

With WIRONIUM® RP Hybrid, BEGO ideally combines analog and digital process steps and expands the partial denture framework portfolio with a two-stage fabricated double crown variant. Customers receive a one-piece partial denture framework with secondary telescopes as a pore-free, finished prosthesis - either in high-gloss polished or blasted condition, according to their preference.



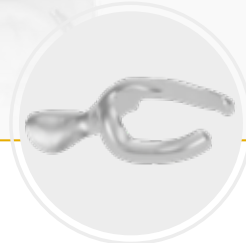
EXTRA
BENEFITS
FOR YOU!



Retentions, polished



Retentions, blasted



Service Part, blasted

SUCCESSFUL RPD TECHNOLOGY

Our WIRONIUM® RP Add-ons

BEGO – Your Partner for Modern Removable Partial Denture Technology

BEGO stands for reliable and high-performance partial denture technology – digitally integrated, precisely engineered, and designed for hands-on clinical and laboratory workflows. With decades of experience and a strong commitment to innovation, we set benchmarks in dental manufacturing. Our expanded WIRONIUM® RP portfolio offers additional components designed to enhance flexibility and efficiency in the fabrication of removable partial dentures. Whether for complex indications or customized solutions, the new additions help streamline laboratory processes while delivering outstanding material quality and user convenience.

- Retentions for upper and lower jaw (polished/blasted)
- Service Part (blasted)

The BEGO application support team is available to assist you with the setup and installation of the new material files. Feel free to contact us by phone at +49 421 2028-200 or via email at cadcam@bego.com.



BEGO WIRONIUM® RP





ALWAYS UP TO DATE

Today. And Tomorrow.

Classic meets innovation: Our partial denture courses

As your partner in advanced training, BEGO offers you professional training courses at the highest level and with the latest technologies – according to our principle of „Continuous learning is the key to success“.

What to expect:

- Advanced training with exocad* or 3Shape* software solutions
- Highly dedicated trainers (master dental technicians and dental technicians) with many years of experience
- On-site courses in Bremen, your laboratory or also in the form of various online formats, e.g. web seminars



All information about the BEGO partial denture courses can be found at www.bego.com/modellgusskurse





REAL-TIME PRODUCTION STATUS

The BEGOconnectApp

Whether your orders have been received by BEGO Medical, are in production, have been completed, or have already been shipped, and where they are with the courier service provider, you can find out all this with our BEGOconnectApp.

This way, you always have all relevant information available at the right time. The app serves as a virtual window into the high-tech production center of BEGO Medical.



BEGO PARTIAL DENTURE ALLOYS

Product details Wironit®

Alloy characteristics	
BEGO Color Code	8
Type (acc. ISO 22674)	5
Density	8.3 g/cm³
Preheating temperature approx.	950–1,050 °C
Solidus temperature, liquidus temperature	1,260; 1,400 °C
Casting temperature approx.	1,460 °C
Modulus of elasticity	220 GPa
0.2 % Proof strength (R _{p0.2})	520 MPa
Elongation after fracture (A ₅)	7 %
Vickers hardness	360 HV10

Qualified analysis in % by mass	
Co	64.0
Cr	28.5
Mo	5.0
Others	Si 1.0 · Mn 1.0 · C

Availability	
Content	1 kg
REF	50030



Product details WIRONIUM®

Alloy characteristics	
BEGO Color Code	8
Type (acc. ISO 22674)	5
Density	8.2 g/cm³
Preheating temperature approx.	950–1,050 °C
Solidus temperature, liquidus temperature	1,310; 1,410 °C
Casting temperature approx.	1,440 °C
Modulus of elasticity	233 GPa
0.2 % Proof strength (R _{p0.2})	625 MPa
Elongation after fracture (A ₅)	13 %
Vickers hardness	345 HV10

Qualified analysis in % by mass	
Co	63.0
Cr	29.5
Mo	5.0
Others	Si 1.0 · C · Mn · N

Availability	
Content	1 kg
REF	50065



Product details WIRONIUM® RP

Alloy characteristics	
BEGO Color Code	8
Type (acc. ISO 22674)	5
Density	8.5 g/cm³
Particle size	10–45 µm
Particle shape	round/spherical
Solidus temperature, liquidus temperature	1,380; 1,420 °C
Modulus of elasticity	235 GPa
0.2 % Proof strength (R _{p0.2})	800 MPa
Elongation after fracture	13 %
Vickers hardness	395 HV10

Qualified analysis in % by mass	
Co	66.2
Cr	28.2
Mo	5.5
Others	N < 0,1

Availability	
Content	5 kg
REF	50532



Accessories

Article	Content	REF
Wiweld, CoCr laser wire, carbon-free, Ø 0.35 mm	2 m – 1.5 g	50003
Wiweld, CoCr laser wire, carbon-free, Ø 0.5 mm	1.5 m – 2 g	50005
Cobalt-chrome solder	4 g	52520

BEGO Delivery time for SLM-manufactured partial denture frameworks*

Article	Workdays
SLM-manufactured partial denture framework unpolished WIRONIUM® RP	2
SLM-manufactured partial denture framework polished WIRONIUM® RP	2
SLM-manufactured partial denture framework hybrid unpolished WIRONIUM® RP Hybrid	3
SLM-manufactured partial denture framework hybrid polished WIRONIUM® RP Hybrid	5

* nach Datenübermittlung bei Auftragseingang bis 14:00 Uhr an Werktagen

READY – STEADY – GO!

Join our team!

“

OUR ENTRY INTO DIGITAL MANUFACTURING BEGAN WITH CROWNS AND BRIDGES. TODAY, WE PRODUCE NEW CONSTRUCTIONS 80% DIGITALLY – FROM CROWNS AND BRIDGES TO ABUTMENTS, SPLINTS, PARTIAL DENTURE FRAMEWORKS, COMPLETE DENTURES, AND HYBRID MODELS. THIS ALLOWS US TO WORK WITH MAXIMUM EFFICIENCY AND COST-EFFECTIVENESS.

”

ANDREAS PRESUHN,
PRESUHN DENTALTECHNIK, BURGSTEMMEN



PARTNERS IN PROGRESS

www.bego.com



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