

THE KOMET MAGAZINE



Dental Reality

AT LAST:
THE BEST TRICKS AGAINST
BUBBLE TROUBLE.

JACK:
THE NEWCOMER ON THE
CROWN CUTTER STAGE.

HELP!
WHAT NEEDS TO BE
DONE IN THE CASE OF
PERIIMPLANTITIS?

You've got
the Style.

WE'VE GOT THE FILE.



Making direct connections.

The Komet K1SM white ceramic bur is revolutionizing cavity preparation procedures. Engineered to heighten sensitivity for superior excavation precision, the bur's single-piece, hard-ceramic construction creates a direct connection between the operator and carious dentin. With an exceptionally long service life paired with

unmatched accuracy and efficiency, the K1SM round bur brings emerging technology to today's dentistry.

K1SM: The direct connection between the problem and its solution, direct from the factory.

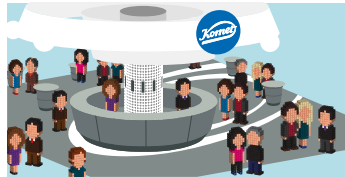


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Klaus Rübesamen.

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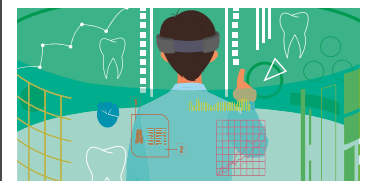
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KLAUS RÜBESAMEN

Managing Director



A magazine from Komet. Have Gebr. Brasseler now become publishers? Not at all, but we have so much good news to report that at this IDS we have decided to provide you with as many pages on Komet as possible; not as a catalogue, but as a publication which is striking, lively and rich in content. And that's just the way we view our brand. And how do you view our brand? We asked dentists and dental technicians this question all over Germany. And the answers were very pleasing indeed. Above all, Komet stands for reliability and high quality products that are made in Germany. This latter point is particularly important for us. In Germany, you buy Komet through our sales force, by telephone or from our web shop; always directly, without detours.

Practical reality is the truth.

WHAT WE AT KOMET MEAN BY DENTAL REALITY. AND HOW IT CAN
MAKE YOUR DAILY ROUTINE EASIER. FROM A TO ENDO.

In selected markets direct sales guarantee you a fast and reliable service, which is typical for Komet. This ensures that we are always that little bit closer to our customers and their everyday routines. We know your needs and your requirements, we sense what you really lack and what the true benefits are. What you can trust and what you wish for. Which classic products you believe in and which innovations you are looking for.

This is what we mean by Dental Reality. Complete knowledge of what makes your daily routines easier, more effective and more successful. And we act according to this knowledge, and have been doing so since 1923, when the Brasseler brothers founded their company and named their brand Komet.

From being a small company – in today's terms we would refer to it as a start-up – the company has developed into an internationally operating manufacturer of dental instruments and systems, with over 1000 employees in Lemgo and more than 200 colleagues in the various subsidiaries abroad.

And Dental Reality keeps on advancing. From day to day, from year to year, from beginning to endo. With answers always provided by Komet. And with a comprehensive portfolio of proven solutions and new ideas which keep setting benchmarks.

With best regards from Lemgo. Yours, Klaus Rübesamen

HALL
4.1
BOOTH
A080

The stand
of dental
expertise.



01

GENERAL DENTISTRY.
Komet is one of the leading manufacturers of dental systems and instruments. Over 3000 different products from the works in Lemgo are marketed worldwide. Find out here what makes the Komet quality so special.

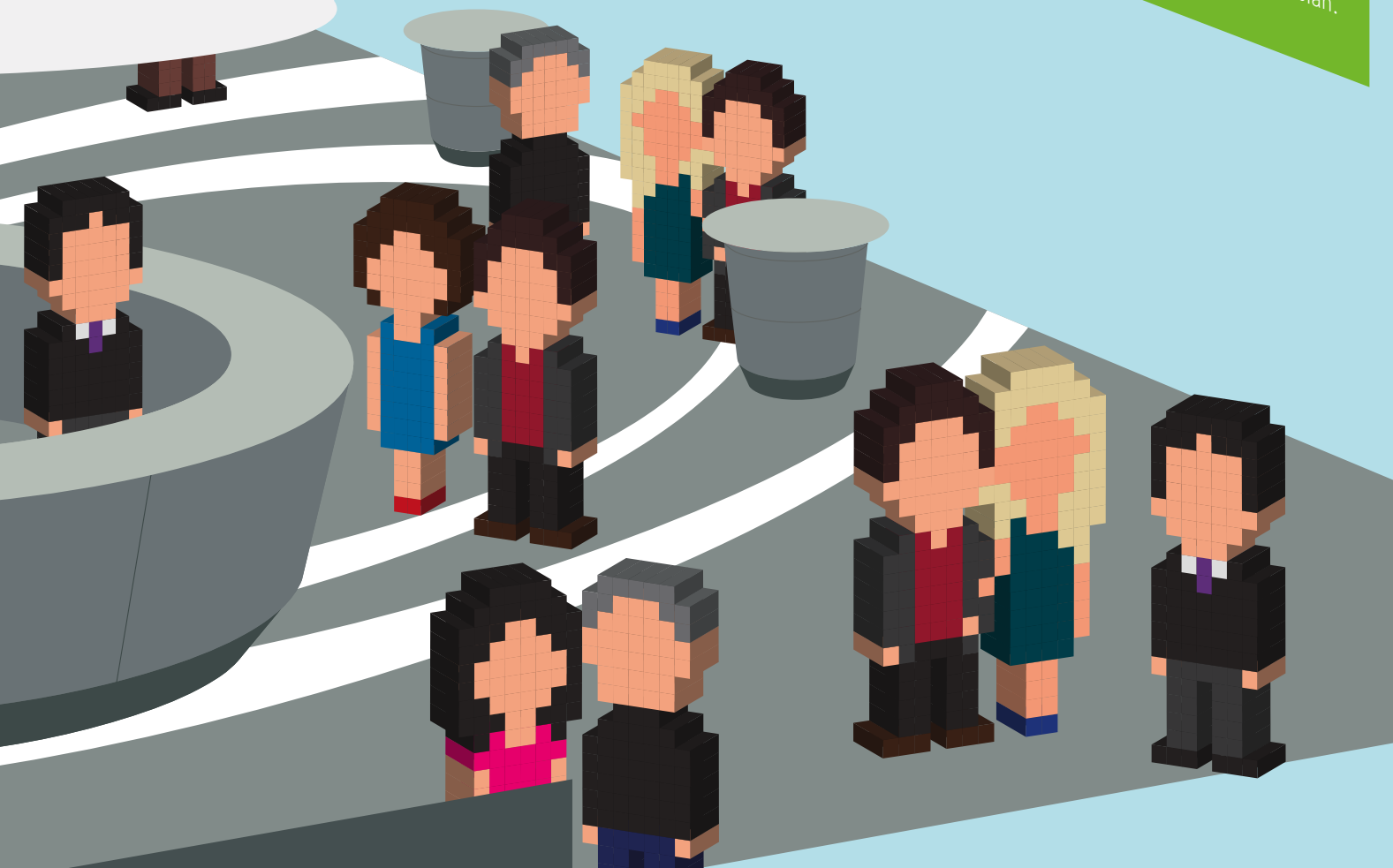
02



03

LABORATORY.

Komet is art. The sophisticated craftsmanship in dental laboratories is difficult to imagine without the products from Lemgo. This is why the demonstration counter at the Komet stand is a must for every dental technician.



ENDO.

Komet has offered its customers a complete endo range for some time now. For dentists in general practice as well as for endo specialists. This segment has proven so successful that it will be showcased this year with its own demonstration counter.

Komet at the IDS. Experience Dental Reality in theory and practice at its most up-to-date. Numerous demonstration counters invite you to test the products and systems personally.

Separations of the year.

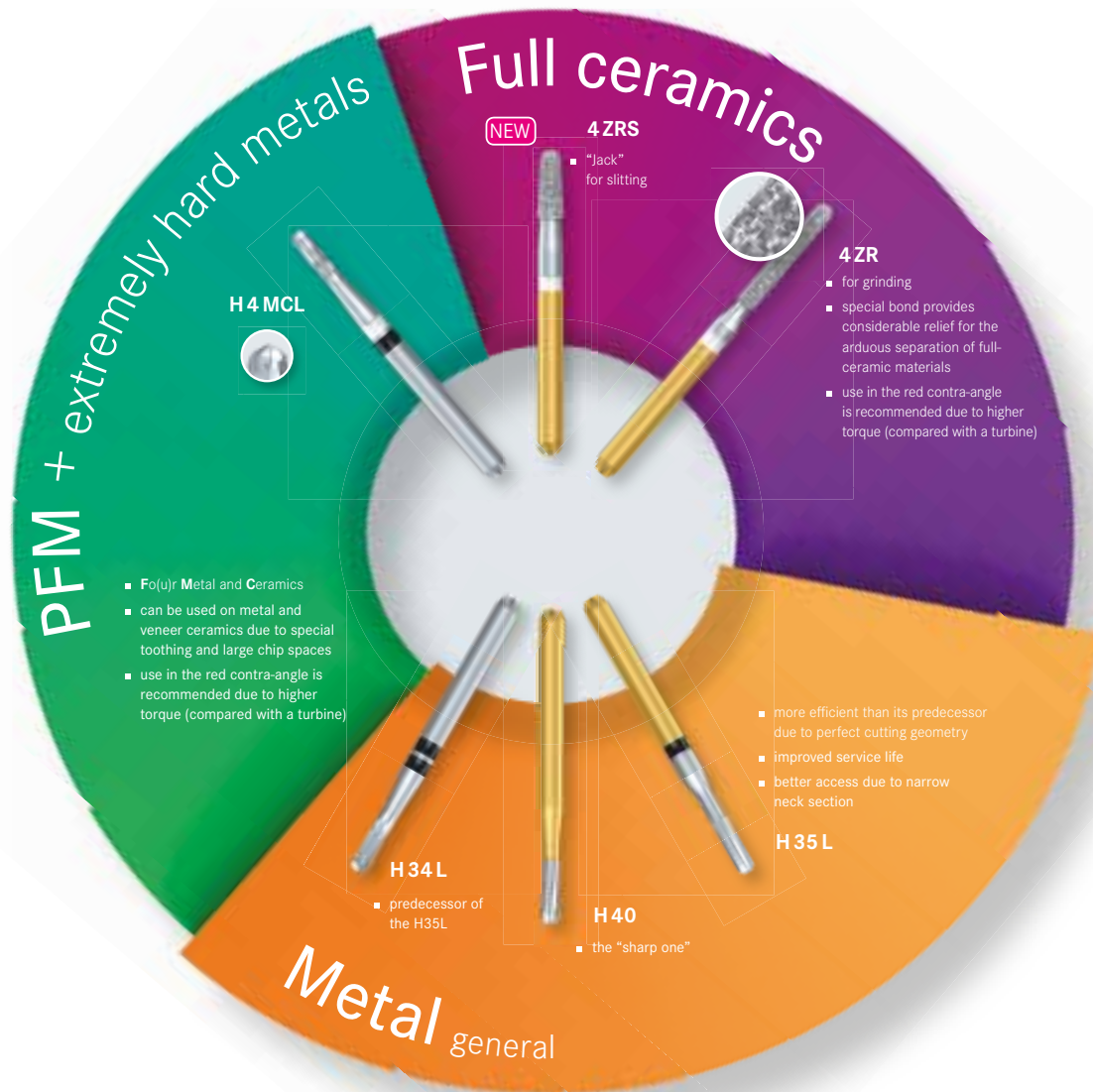


THERE ARE PLENTY OF CROWN CUTTERS. FIND THE RIGHT ONE HERE.

Crowns can often lead to surprises in cutting routines with hardness and intractability. This is why a single crown cutter alone is not sufficient. And this tedious work also takes up valuable time. It is certainly easier and more effective to have a true specialist at the ready for every material: for non-precious metals, precious metals or all-ceramic restorations.

Crown cutters are among the classic products of the Komet portfolio, but this does not mean that their development stops. Quite the contrary: materials and cutting geometries are reviewed regularly to save you effort and bother. And at the end of the year, you will find that you have used fewer crown cutters in total than before by approaching the specialists.

The Komet crown cutter compass always lets you find the right instrument easily and quickly. Allow us to showcase our best cutters in brief.



Komet's most successful crown cutter is the H4MCL. Its special toothing with pyramid-shaped blades and large chip spaces masters even the hardest of metal crowns. It even allows for the slitting of veneer ceramics during the initial work step. It has been copied often, but its performance remains unrivalled. In the case of metal crowns that are less hard, we recommend our H35L. The sharp, free-standing blades from this special cutting geometry

are able to master metal crowns that aren't as hard. And a quick word about our tungsten carbide burs. They are so-called two-piece constructions. Compared to solid carbide crown cutters, this concept keeps vibrations low while maintaining a high performance level. This is good for patients, the user and the handpiece. In the days of full ceramics, you also need a special instrument which can cut

through "white steel". This is why we developed a diamond coated crown cutter with a special diamond bond. This allows for superior substance removal and greater durability when working on all-ceramic materials. If you wish to remove the crown completely, we recommend our 4ZR. It has a working part of 8 mm. One of the major challenges is cutting adhesive all-ceramic crowns. According to a GfK survey, 82% of users

use a crown cutter and a hand instrument for this. Before using a manual instrument, we recommend trying our new member of the cutting team: the Jack, also called 4ZRS. With a 4 mm long and conically shaped workpiece, the Jack is perfectly suited to creating several separating joints orally, occlusally and buccally. That is a necessary requirement if we are dealing with adhesive attachments.



The accelerator.

CAN'T IT BE DONE ANY FASTER?
YES, IT CAN. WITH OUR S-DIAMONDS.

Time is valuable. And therefore requires optimal management in all daily dental routines, whether this relates to cavity preparation or crown preparation. This is where you will soon discover your passion for our accelerators: Komet's S-Diamonds.

What was the background to developing the S-Diamonds?

The amount of substance removed by a diamond instrument is generally controlled by its grit size. As a rule, coarser instruments remove more substance than finer instruments. However: the coarser the grain, the fewer grains can be placed on the working part of an instrument. The smaller the grain, the denser

What is so special about our S-Diamonds?

The secret to the S-Diamonds is the blank. The diamond grain covers a structured blank. This leads to better abrasion performance and cooling. This idea is so unique that we were able to patent it instantly.

Where is the benefit for the user?

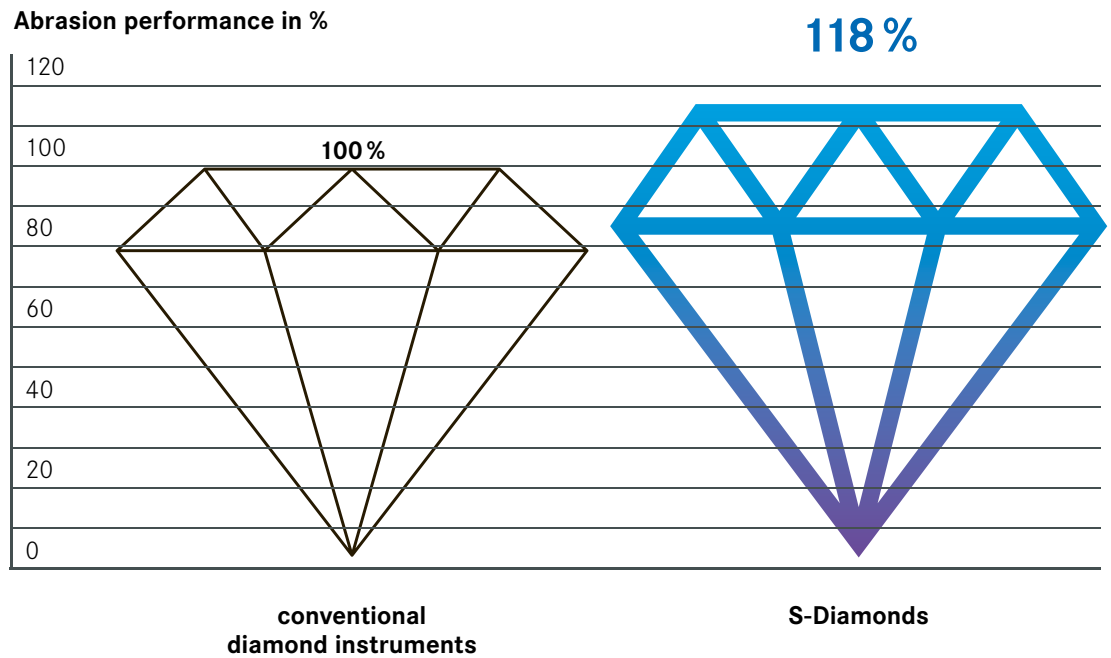
Consider how much of your treatment time is spent on grinding teeth. Then add it up for the year and consider an instrument with 18% greater abrasion performance. That should prove convincing. Furthermore, every minute you can save when preparing teeth is of advantage for the prognosis of the tooth. And last but not least, don't forget the aspect of better cooling.

instruments, others cylindrical shapes, round head or torpedo shapes: the range offers everyone their favourite shape. As for the length, the S-Diamonds for crown preparation come with working parts ranging from 6 to 12 mm. They can be used both for short crowns in the posterior tooth region as well as for long, periodontally damaged teeth. By the way, we also provide the corresponding finishers to allow uniform finishing of the preparation.

Are the S-Diamonds special products that are only used by a few customers?

Not at all. For example, if we look at the German market, we sell more S-Diamonds

A top-class test result: the S-Diamonds have a 18% greater abrasion performance than conventional diamond instruments.



the coating. And you should also take into account that the heat development and its effect on the tooth during preparation should not be excessive. Another important aspect is the fact that very coarse instruments create a rough surface on the tooth. To increase the abrasion performance, you therefore need to proceed very carefully. And that is exactly what our development engineers did when they developed the S-Diamonds.



How comprehensive is the portfolio?

In total, some 80 different S-Diamonds are available, in both the typical shapes for cavity preparation as well as a broad range for crown preparation. In terms of prosthetics, it was particularly important for us to take the individuality of our customers into consideration. Some prefer tapered



than conventional preparation instruments with corresponding grit size. If you have not tested these instruments yet, we suggest you to do this soon: and save valuable time. You can recognise our S-Diamonds by their green ring and the golden shank.



New forms of preparation

A discussion about occlusal onlays. With Univ.-Prof. Dr. med. dent. Daniel Edelhoff and Priv.-Doz. Dr. M. Oliver Ahlers.

Why is it appropriate to treat teeth with the new technique of occlusal onlays instead of traditional crowns?

Edelhoff: Well, first of all we need to reiterate that crowns are durable and definitely successful indirect restorations. For example, the loss ratio of metal-ceramic crowns is demonstrably low. However, a commentary by the DGPro (German Association for Prosthetic Dental Medicine and Biomaterials) states that every crown has the inherent risk of a loss of vitality – and this applies per tooth. And this risk accumulates, particularly in the case of extensive work for restoring the contour and function of several teeth. This is mainly due to the invasiveness of the crown preparations. In earlier studies, (Edelhoff and Sorensen 2002) we were able to show that approx. 63 – 73% of the volume of the respective natural crown was lost during crown preparation. Today, we have considerably less invasive treatment options, with the availability of reliable adhesive bonding techniques in combination with translucent dental restoration materials. The largely subtractive concept of mechanical anchorage of the restoration with traditional cements is increasingly being replaced by a mainly defect-oriented and additive approach. This is also supported by the fact that the number of carious lesions is decreasing in the population, but that bio-corrosive defects of teeth are on the increase. This requires a modification of traditional treatment approaches in favour of lower biological costs. It therefore made sense to search for less invasive preparation methods.



Priv.-Doz. Dr. M. Oliver Ahlers

Specialist for functional diagnostics and therapy
Head of the CMD-Centre Hamburg-Eppendorf

Ahlers: And in fact, a number of new preparation forms have therefore been developed over the past few years where considerably less tooth substance needs to be removed. These so-called “minimally invasive” methods

are based on new, more resistant tooth-coloured materials and the knowledge that durable restorations are feasible even in the case of thinner walls. Depending on the preparation form, these are referred to as “occlusal onlays” or

need new diamonds.



Prof. Dr. Daniel Edelhoff

Specialist for dental prosthetics
Director of the Polyclinic for Dental Prosthetics
LMU Munich

“occlusal overlays”, or somewhat casually as “tabletops”. Their preparation has proved a little problematic so far, as the available grinding instruments had been developed for traditional crown and partial crown preparations.

And it takes considerable skills to carry out minimally invasive preparations with these instruments. This led to the idea of developing a new generation of grinding instruments to facilitate minimally invasive procedures.

Why is it so much easier to prepare occlusal onlays with your new set?

Ahlers: Because the new shapes we developed allow for a different approach. Depending on the initial situation, the planned occlusal penetration depth is marked as a first step, whereby the laser marking on the new 855D grinding instrument indicates whether one has already penetrated 1 mm deep – as planned – during preparation. In a different position, the same diamond then allows precise occlusal substance removal. To shape the occlusal surface, we have developed an entirely new occlusal diamond (ref. 370), the so-called OccluShaper, which automatically shapes the chewing surface according to the principles published earlier by an expert committee. A shape-congruent finisher (ref. 8370) allows the smoothing of the surface without changing the shape. This, by the way, corresponds to the specifications of the DGZMK (German Society for Dental and Oral Medicine) for preparation technique.

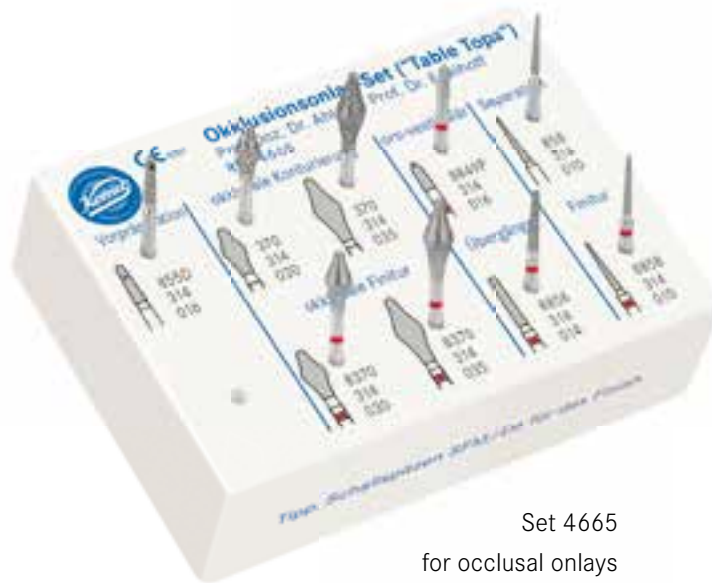
Edelhoff: Subsequently, the orovestibular margin of the onlay is shaped with another new diamond with special geometry (ref. 8849P). The instrument comes with an uncoated guide pin which ensures that the diamond only abrades the defined volume and cannot penetrate too deeply. Very slim separators (ref. (8)858) are used for approximal preparations. These are perfectly complemented by further new sonic tips of matching shape. Coated with diamond grit on one side only, the new sonic tips will be available as of summer 2017. These ensure that the required shape is created with precision, even in cases where only a thin layer of substance has to be removed, and that the adjacent teeth remain untouched. The sonic

tips owe their effectiveness to their roughness which is slightly above that of traditional finishers.

Can everyone use the new technique?

Edelhoff: The first question is, in which cases are such preparation forms appropriate? This is always the case when the treatment involves a restoration that covers the occlusal surface and where the remaining tooth substance allows for minimally invasive preparation. *Restorative* indications typically arise in teeth which are not severely damaged in the classic sense, but in teeth where the occlusal surfaces are severely damaged and where an indirect minimally invasive restoration is required to retain vitality or preserve the remaining biological structures.

Ahlers: Add to this those *functional* indications requiring restorative treatment to readjust the occlusion. According to statements by the DGZMK, the DGFDT, the DGPro, the DGKFO and the DGMKG, this is indicated if pretreatment has shown that the occlusion or jaw position is significantly involved in the development of functional complaints and that correction is a suitable measure for relieving or remedying the complaints. In my



Set 4665 for occlusal onlays



More information on the topic is available in brochure 418600.

opinion, the greater challenge in such cases is to keep track of the overall situation and to assess it correctly. In comparison, the implementation of the preparation can be controlled well with the new diamonds. Practice makes perfect, so it might be a good idea to practice minimally invasive preparations on a situation model prior to clinical application. After one or two tests, the dentist gets used to the less invasive procedure and comes to appreciate the new set for occlusal onlays.

What distinguishes the new instruments from existing ones?

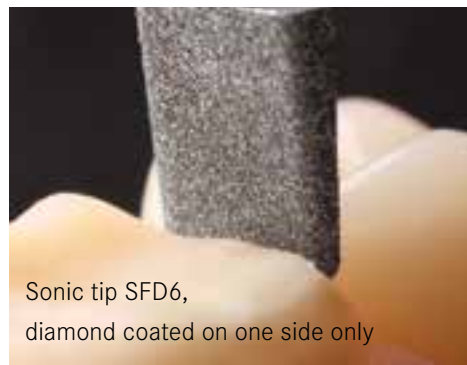
Edelhoff: Their shape and the small number of instruments required to achieve the desired preparation shape efficiently, predictably and under perfect control. In addition, the simultaneous development of rotary abrasive instruments and matching sonic tips is currently unique and simplifies the procedure considerably.

The new OccluShapers are visual eye-catchers. They are of a completely novel design. What are the advantages compared to existing shapes, for example, the popular egg shape?

Ahlers: On the one hand, the OccluShapers are distinguished by their ability to create a rounded shape in the middle (central fissure), which is necessary for ceramic preparations in particular. On the other hand, the new OccluShaper automatically creates the transitions to the cusps and rounds these to a convex shape with its concave profile with a view to provide anatomical support to the restoration to be applied. The OccluShaper comes in two sizes, one size for premolars (size 030) and one size for molars (size 035). In contrast, the egg 379 was at the time intended for the preparation of palatal surfaces. In principle, its shape is not conceived for occlusal contouring. And the bud 390 is intended for occlusal grinding. The high loss of substance involved with classical crown preparations meant that there was no need for a specially adapted occlusal diamond – this has now changed.



OccluShaper 370.314.035



Sonic tip SFD6, diamond coated on one side only



Service and reliability. Day after day.

We don't just offer you valuable instruments and innovative solutions, but also our undivided attention and our comprehensive service: If you have a question, we will give you a helpful answer.

If you need a product, we will send it to you directly. In short, the Komet philosophy shines through in everything we do.





Underestimated beauty.

A PLEA FOR POLISHING.



Polishing is often regarded as the “icing on the cake”, although it is obligatory from a clinical perspective. But let us start a bit earlier. Thousands of composite fillings are fitted every day.

The fact that perfect fillings are elaborate and valuable work hardly stands to dispute. But the value of this work deserves a worthy conclusion. Polishing is far more than a merely aesthetic measure. The smoother the surface is polished, the lower the risk of plaque accumulation. And smoothness also significantly improves the long-term prognosis of the restoration. A smoothness which patients can feel directly and appreciate.

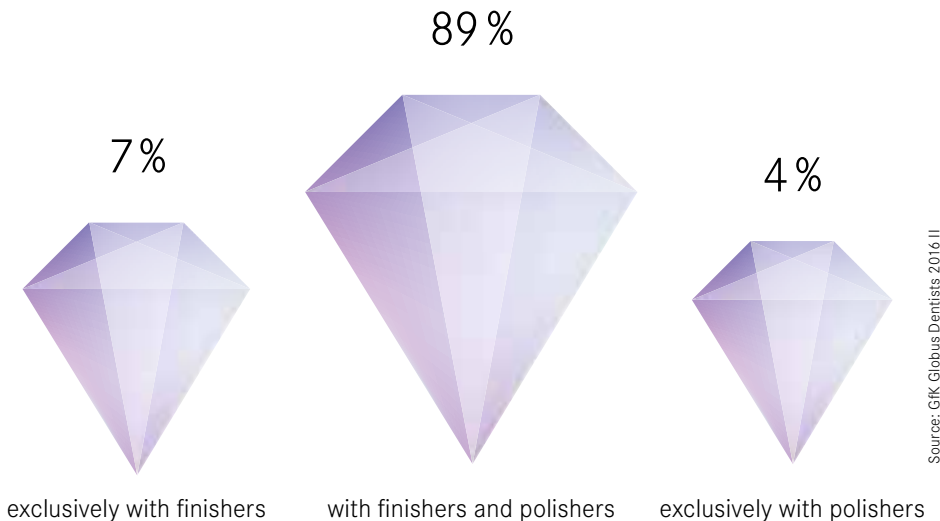
This is why virtually all clinicians use

high-performance polishers these days to provide their fillings with a perfect surface finish.

Nothing ventured, nothing gained. In reality, perfect polishing is hard work. But work that is easy to accomplish. Komet makes work extremely easy, but above all, safe and effec-

tive. The modern Komet polishing systems operate with a maximum of two polishing steps. This reflects the trend: according to a survey, some 89% of practices meanwhile use a finisher followed by a polisher system. A development we believe to be very sensible.

How dentists realise composite fillings:



Source: GfK Globus Dentists 2016 II

A. McCray Jones III, D.D.S., PA, Washington, NC: “The Komet polishing spiral has changed everything in my practice. Previously I had to use cups as well as flames with two different grains to achieve the desired gloss across all areas of my composite restorations. The Komet polishing spiral adapts so well to the anatomy that I can use it for polishing the occlusal surface and the interproximal sur-

faces, which means I can halve the time and the number of instruments I need for polishing. Plus, the gloss is far superior to that of my previous polishers!”

Flexible, fine and durable: Komet polishing spirals reach all areas.



“Most dentists
don’t
prepare
deep
enough.”

Ceramic crowns often fracture because the preparation is not deep enough. Komet has followed up on this, and included special depth markers in its portfolio which specifically address this issue. We spoke to dentist Dr. Jürgen Wahlmann and master dental technician Arnold Drachenberg about the new PrepMarkers, which represent a win-win situation for both sides.

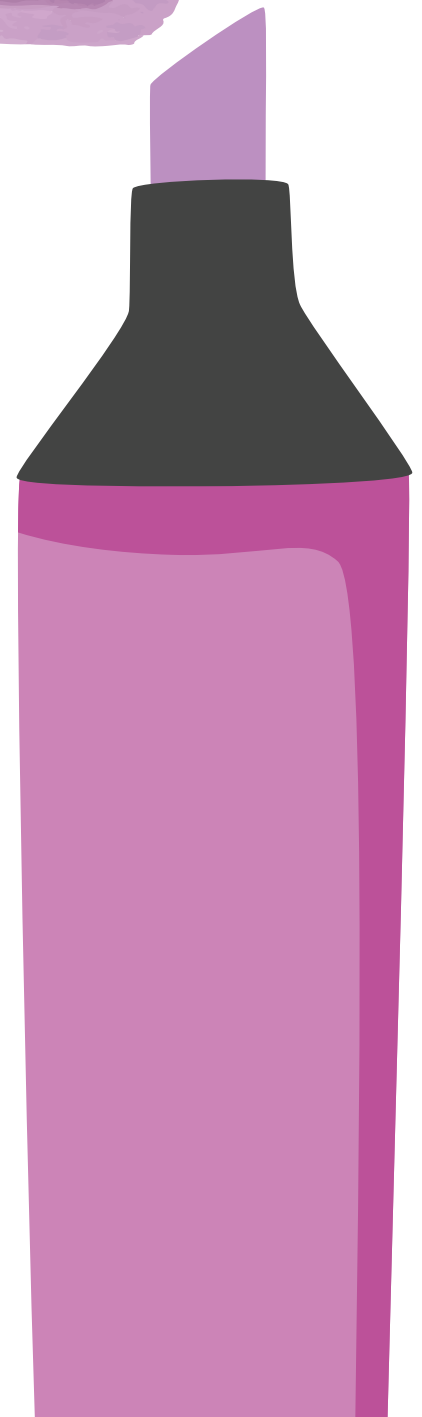
Dentists and dental technicians operate in a classic customer-supplier relationship. Does this occasionally lead to problems?

Drachenberg: Normally, an exchange should

take place on equal terms and criticism should be possible in both directions. Unfortunately this is not always the case.

Why should the placement of simple orientation grooves with preparation diamonds, which has been practised for decades, no longer be adequate?

Wahlmann: First of all, a lot of dentists no longer work like this. And secondly, it is technically impossible to cover the entire central fissure with conventional instruments. Some prepare too deep, others not deep enough. The PrepMarker helps both groups. If the preparation is too deep, the biological costs increase, and the risk of preparation trauma increases enormously. If too little is



removed, this results in chipping. It is all about finding the right balance. When I used the PrepMarker for the first time, I was surprised to see how much was really marked. On the first course where I used the PrepMarker, all the participants were amazed at how much 1.0 or 1.5 mm really represent in occlusal marking.

Are the PrepMarkers becoming more important these days as ceramic materials are becoming more widespread?

Drachenberg: Yes, that is correct. Metallic restorations can be quite forgiving, but ceramic restorations have no tolerance for errors.

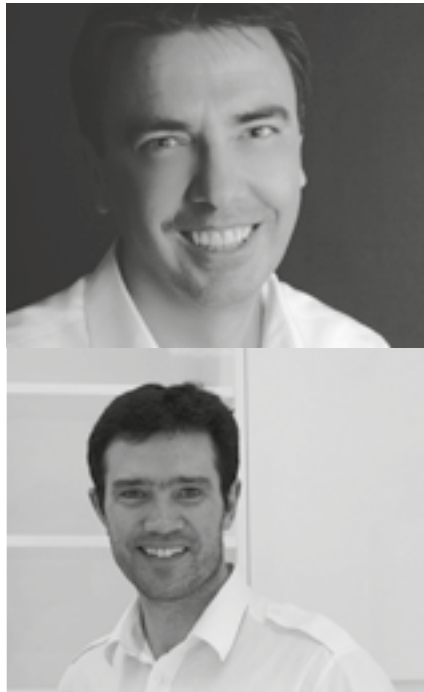
What are your experiences from the laboratory side? What did the first preparations made with a PrepMarker look like?

Drachenberg: When I saw the first preparation made with the aid of a PrepMarker, one thing was clear to me: this is something different. A very uniform reduction in substance and thus the best pre-conditions for a long-lasting ceramic restoration.

For which preparations are PrepMarkers useful?

Wahlmann: The four PrepMarkers seem to have great potential. They are suitable for all buccal, vestibular, occlusal and oral depth markings. Not only do they provide greater reliability for crowns, but also for partial crowns, inlays, onlays, tabletops and veneers. And it is always the same procedure, regardless of the restoration. If required,

the central fissure and the area to be prepared are marked prior to preparation.



Dr. Jürgen Wahlmann

President of the German Society for Cosmetic Dentistry (DGKZ), Practicing dentist at his own dental practice in Edewecht, Germany, since 1989.

DMT Arnold Drachenberg

Master Dental Technician with his own laboratory in Windhagen



PrepMarker
Set 4663





Sonics in perfection.

THE KOMET SONIC AND ULTRASONIC RANGE.

An artist is only as good as his instrument. And this goes even further: only the perfect instrument allows its user to become better, to hone his personal skills and achieve exceptional results. We at Komet do everything to provide a harmonious interplay between medical proficiency and the highest instrument quality. A perfect example is our sonic and ultrasonic tip range: it embodies what makes your daily routine effective, successful and safe.

To achieve and maintain an exceptional level of quality it demands maximum precision during every step of the production chain. From the blank to the perfect tip. According to Dr. Thorsten Bergmann, our Head of

ical of Komet. Komet sonic and ultrasonic instruments are manufactured from surgical steel which complies with the strictest quality requirements. The perfectly matched manufacturing processes add their contribution to the final product. For example, this creates an extremely fine surface structure which guarantees optimal abrasion performance and a notably good result.

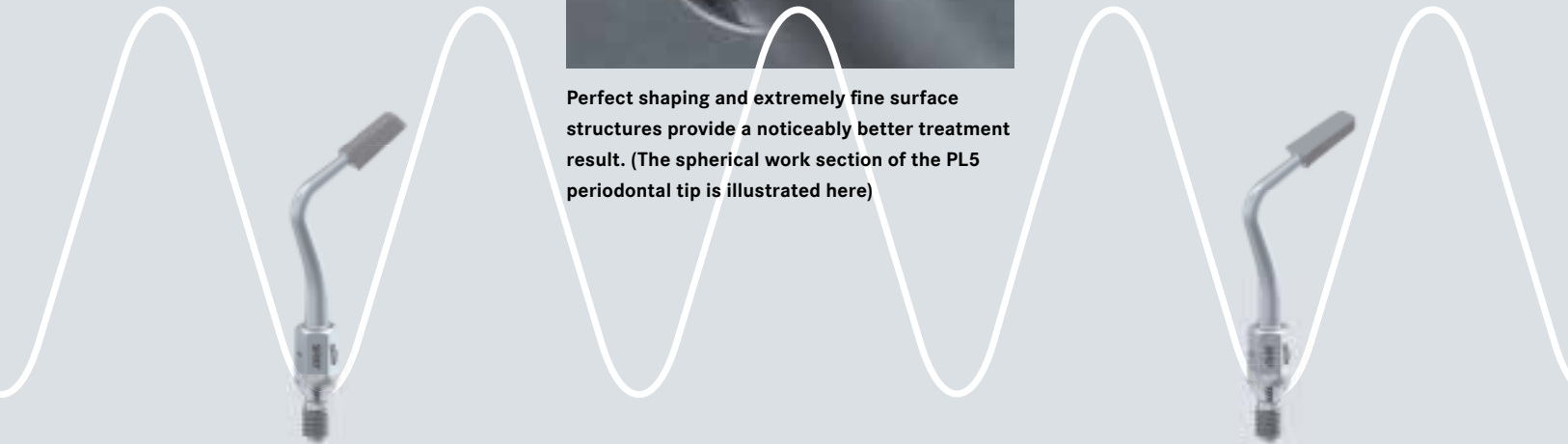


Perfect shaping and extremely fine surface structures provide a noticeably better treatment result. (The spherical work section of the PL5 periodontal tip is illustrated here)

to natural wear and tear. This is why Komet offers you a tip inspection card for every connection. This lets you check when you need to change the instrument.

Our concept of comprehensive quality naturally includes validated cleanliness. This is provided by the Komet rinsing adapters.

When the instrument is cleaned and processed after treatment, you tend to forget that the cooling channel also needs to be cleaned. This is where the Komet rinsing adapters offer smart and simple help. Screwed to the injector rail of the thermal disinfecter (e.g. Miele or Melag), the rinsing adapters provide validated cleaning results and extend the service life of the instrument.



Development: “When manufacturing sensitive sonic and ultrasonic tips, attention needs to be paid to even the most minute detail, and this requires comprehensive expertise in all the areas of manufacturing. We ensure this by doing everything in-house at Lemgo, from the first stroke of a pen to the final quality inspection. This is the only way to achieve our own high quality standard and to offer the perfect product for every system.”

This is how we achieve the quality which is so typ-

Komet ultrasonic tips are distinguished by their linear oscillating behaviour. We match the instrument and handpieces perfectly. This allows optimal performance level recommendations for every indication.

As a long-standing expert on rotary instruments, Komet is also highly aware of the synergies between rotary and oscillating procedures. This results in sonic instruments for crown preparation which are perfectly matched to the rotary instruments used beforehand.

Daily dental routines also leave their mark on our instruments, however. They are subject

And with our long rinsing adapters, you can use every slot optimally.

The best treatment results with sonic tips: because Komet thinks ahead. With our five simple rules for cavity preparation, we guide you through a symbiosis of sonic instruments and rotary instruments to a perfect restoration outcome. Just ask for our compass for full ceramic restorations.

Exceptional quality plus a service which thinks ahead: this is how we define “Sonics in perfection”.



Dr. Thorsten Bergmann,
Head of Product Development Dental Instruments

An ingenious idea. Diamond coating on one side only for efficient and precise substance removal.

At the same time protecting the adjacent tooth with its smooth surface.



Amazingly diverse.

SONIC TIPS, DIAMOND COATED ON ONE SIDE ONLY.
MORE THAN JUST SCALING.

The air-driven sonic handpiece has already established itself in the scaling routines for removing calculus. Not really surprising, as sonic instruments can remove supra as well as subgingival concretions perfectly. However, many users are not aware that the Airscaler can do so much more.

This is why Komet highlights four further valuable indications for the sonic system here.

Tips for precision work: stripping and shaping. Sonic tips for working approximal surfaces. With these instruments, separating prior to crown preparation or rounding of interproximal transitions along the preparation margin during cavity preparation turns into a true masterpiece. Coated with diamond grit on one side only, these instruments



are capable of efficiently shaping the interproximal surfaces of composite fillings in very little time, without using a matrix. In addition, the instruments can be used for approximal enamel reduction as part of orthodontic treatments.

Perfectly shaped cavity design: the sonic tips for approximal cavity preparation. The popularity of full ceramic restorations is increasing constantly. The shaping of the approximal region poses a special challenge. The SFM7/SFD7 sonic tips help to facilitate the shaping of the approximal boxes, thereby avoiding irregular margins and unstable enamel structures. The subsequent scanning or



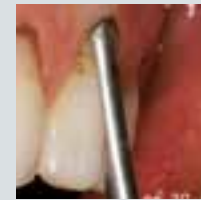
impression-taking of the restoration margins can go ahead without any complications. This provides the perfect basis for further dental treatment.

Closes gaps without breaches: minimally invasive micro-preparation with Micro/Bevel. These instruments do a perfect job for approximal micro-cavities. The small (016) and large hemisphere (024) are suitable for both lateral as well as occlusal access to the cavity. This is where one-sided diamond coating has a decisive advantage: the adjacent teeth are protected during the intervention and the use of magnifying glasses makes these sonic tips suitable for treating even the smallest of lesions. This is why they are also very popular in paediatric dentistry.



A new approach to crown extensions: the gentle way to a beautiful smile. Restoring the biological width prior to crown preparation or the correction of an irregular dental arcade are indications for surgical crown extension.

With its SFS 120-122 instruments, the sonic system offers a gentle, minimally invasive approach. These instruments allow the reconstruction of the biological width without the creation of a flap. The result: a less traumatic, time and cost-saving treatment.



The diversity of sonic tips is amazing. To share this wealth of possible options with you, Komet offers a comprehensive range of sonic instruments, consisting of 4 prophylactic and 6 perio tips, 21 instruments for conservative dentistry, 13 prosthetic, 13 endodontical and 14 surgical sonic tips.

And another tip for all those who don't want to lose any time during their work: the majority of our sonic instruments are also available with the practical Quick connection.





In a leading Role.

THE PERIOSTARS 2017.

If awards could be won in the category “Best periodontal treatment”, then these would be our clear favourites: Komet’s SF10 and SF11. These two instruments are real shooting stars. Their compelling performance has revolutionised automated periodontal treatment. Due to their minimally invasive modus operandi, they allow root planing and subsequent furcation treatment without forming a periodontal flap. The instruments are extremely easy to use within closed treatment, i.e. without flap. This closed mode of operation saves time, does not traumatise the tissue and therefore leads to considerably quicker wound healing.



Periodontal treatments without flap – the easy way.
The Komet periostars.

The SF11: evolution in furcation treatment.

The Komet ideas factory is well known worldwide for its cutting instruments. The synergy of cutting instruments and sonic technology resulted in fundamental new insights for Prof. Günay, developer and leading periodontist at the Medical University Hanover: “The idea for the instrument resulted from the need to overcome the major difficulties in the treatment of furcation periodontitis, characterized by difficult access and the bizarre structures in the furcation region of multi-root teeth. Adequate furcation cleaning without substance abrasion is not possible due to these structures with the existing diamond coated cleaning instruments. As a result, the toothed sonic instrument SF11 was developed which allows easy, effective and atraumatic cleaning of the dental root (furcation) even in regions with difficult access and bizarre structures.” The SF11 can be used for numerous applications, for example prevention, treatment and maintenance therapy (follow-up phase), furcation periodontitis as well as the cleaning and preparation of the root surface (in particular the fissures) and in marginal periodontitis therapy.



**Prof. Dr.
Hüsamettin Günay**
Medical University
Hanover

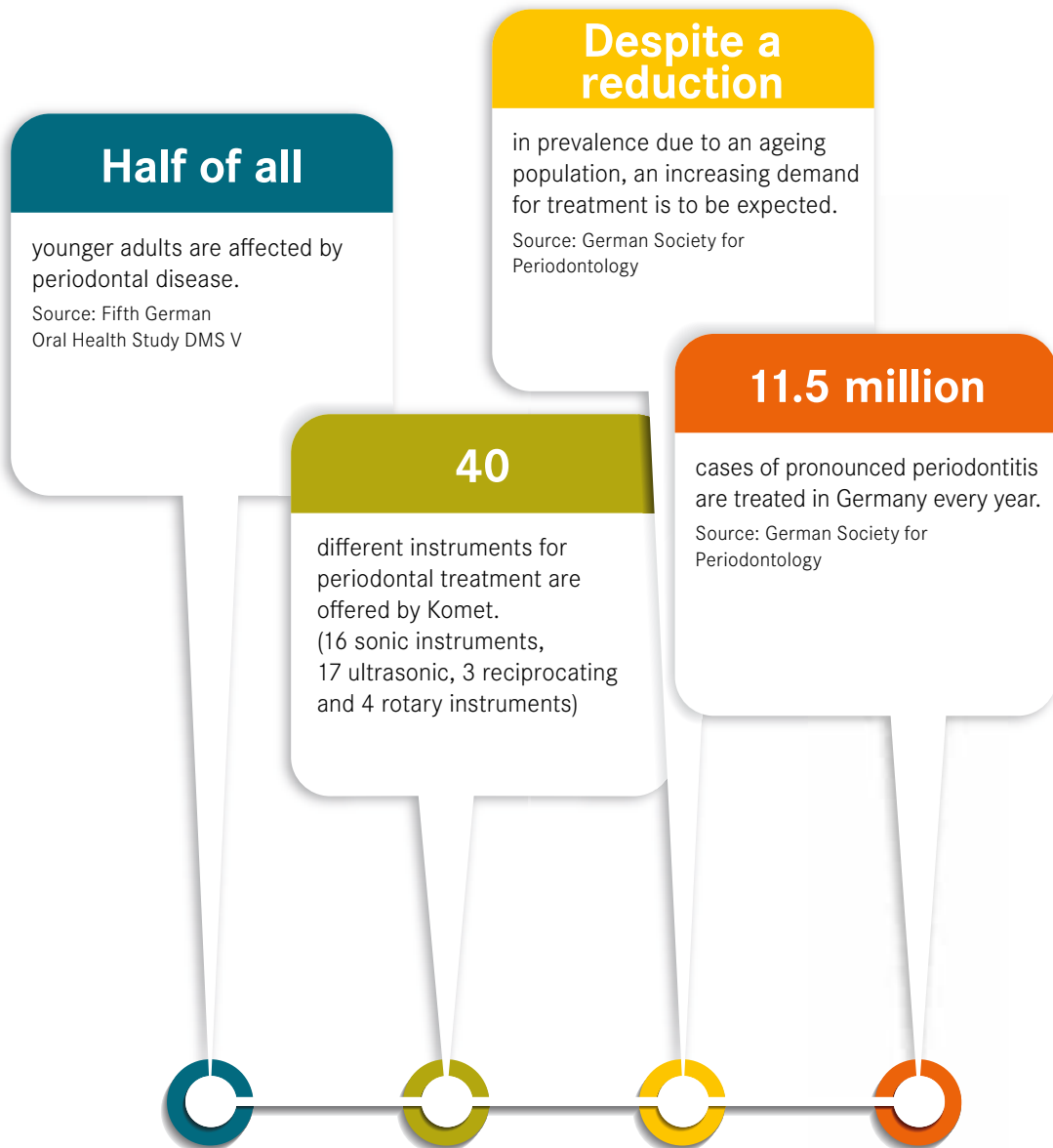
Safe on the outside, sharp on the inside: with the SF10.

Visitors to the Komet booth at the IDS 2015 were in complete agreement: "Why hasn't there been an instrument like this before?". The sonic tip has an impressive and elegant shape and is safe and easy to guide in gingival pockets. Working with the SF10 is considerably safer and less traumatic than with conventional hand instruments. We owe this ingenious innovation above all to Prof. Dr. Günay, the creative mind and initiator of the SF10. The shape and operating angle allow easy insertion, whatever the operative site.

Enthusiastic feedback also came from Dr. Engels (Dorsten, Member of DG Paro), "Despite the offers of professional dental cleaning, elderly people or phobic patients in particular, do not practise proper dental hygiene. Meanwhile this group has become the major part of

our patient clientele. The inner edge of the SF10L/R also enables effective removal of even the hardest deposits, while the rounded edge of the work section reduces the risk of injury without looking dangerous. I use the SF10L/R pulsating for more than 3 seconds. Even the most stubborn concretions can be removed with a little patience, entire blocks even in complex cases - without even touching the root surface! It is very reassuring for me to know that I can use a minimally invasive instrument to create the perfect structure." Due to its delicate shape, the new SF10T - another intelligent product based on the idea of Prof. Dr. Günay - can even reach deep, narrow pockets with ease. The inner working section of the tip cuts on both sides and achieves perfect smooth surfaces.

Four facts about periodontitis

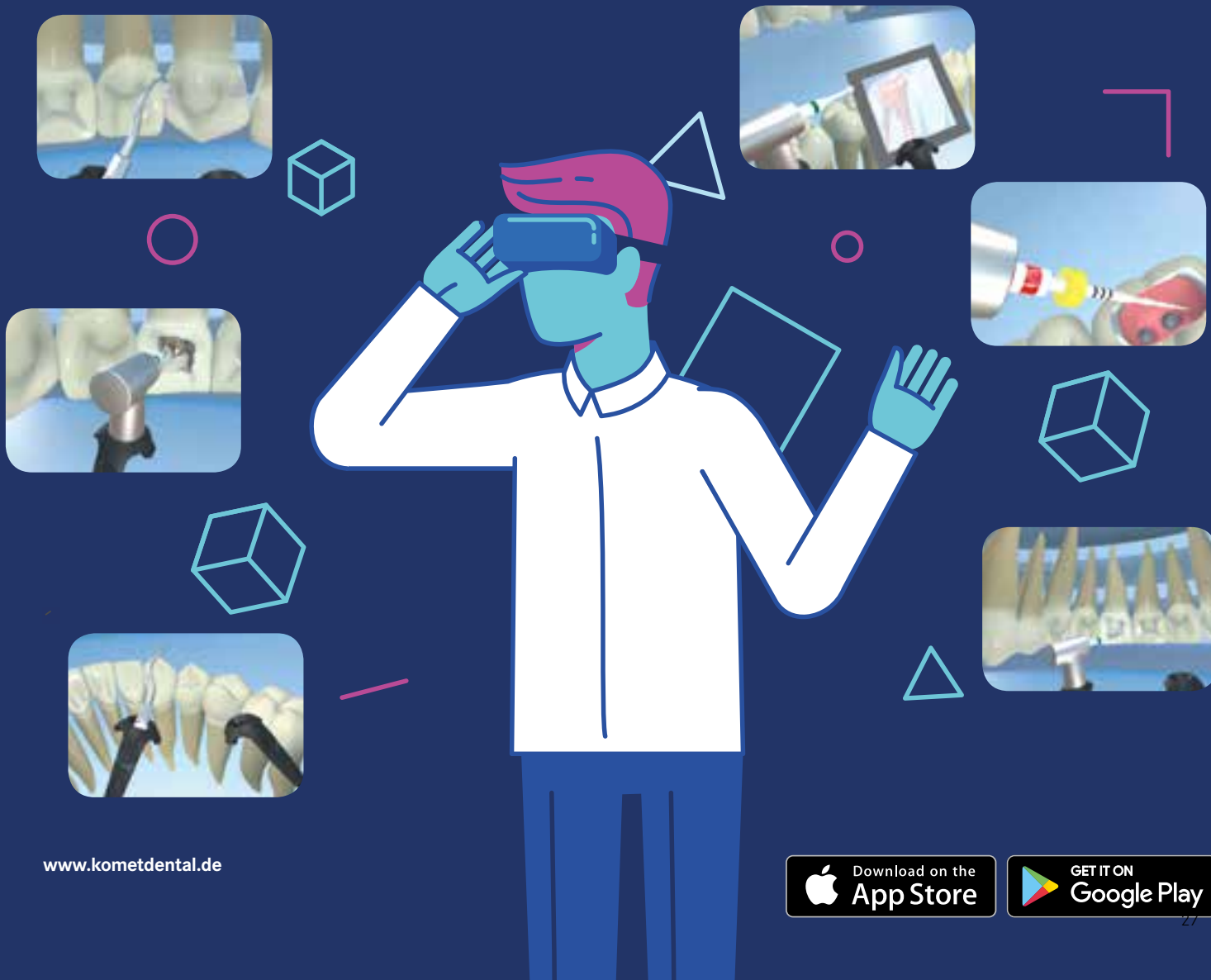




Doctor, please join us in the games room. The Virtual Dentality Game.

Almost more real than reality: the exclusive Virtual Dentality Game from Komet. Put on the virtual reality goggles and show us what you can do. At the Komet IDS Booth 2017, Hall 4.1. Booth A080.

If you are unable to attend the trade fair, that's a pity – but you are in luck: the Komet game is also available as an app in the iTunes Store and the Play Store for your smartphone.



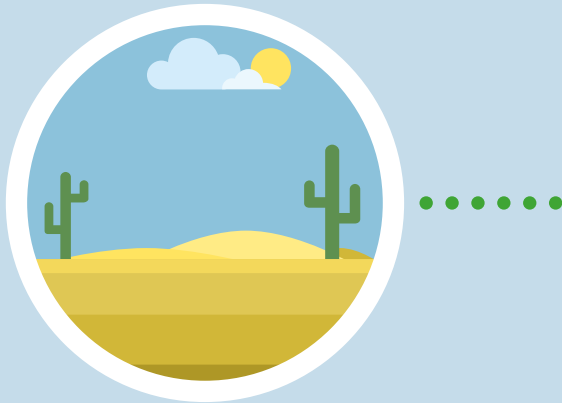
www.kometdental.de



Clean solutions.

The simple truth is that the professional reprocessing of instruments is one of the elementary duties in practice routines. Unfortunately, the truth is also that a few classic mistakes take place again and

again. Here are a few hints to ensure that reprocessing always runs properly clean and smoothly.

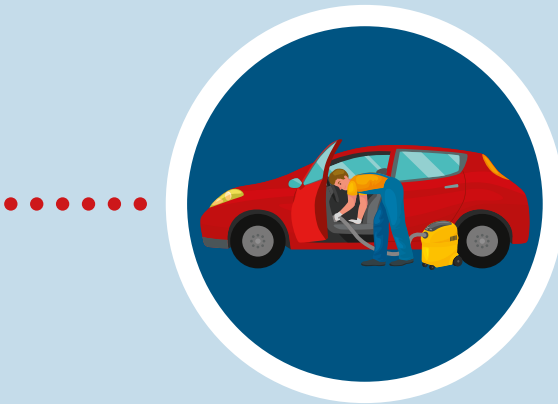


Dryness results in hardness.

Are the instruments coloured black after thermal disinfection or show concrement residues? Rotary instruments, especially diamond coated burs, have irregular surfaces. They should therefore never be stored dry for a prolonged period after treatment, otherwise protein residues may develop, which are then difficult to remove. Immediate immersion in a suitable cleaning agent or disinfectant can prove helpful here. This dissolves protein residues directly. And: the contamination chain is interrupted, which offers optimal protection for the practice staff.

Internal cleaning? Definitely.

Internally cooled instruments, particularly sonic tips, require special cleaning. Without such cleaning, residues can develop in the cooling channel during the automated cleaning. And these can alter the spray jet or allow discharge of unappetising rinsing liquid. Komet rinsing adapters are available for this purpose. They are simply screwed onto the injector bar of the cleaning and disinfection device and effectively clean the inside of the instrument. With this validated processing method you will always stay on the clean side.



Alcohol and polishers? Well, cheers!

Are your polishers swollen after processing and demonstrate little strength? Is polishing material even peeling from the shank? This could be due to the alcohol in the disinfectant. Alcohols dissolve the bonds of polishers and cause signs of wear. To avoid a “hangover”, you should use a suitable, alcohol-free and mildly alkaline cleaning agent in future, for example DC1 made by Komet. Its special composition is compatible with the material of the polishers which can therefore stay immersed for a little longer without suffering any harm.

Clean thinking. To make sure you are always up-to-date in terms of reprocessing, we have put together some information materials for you, ranging from a reprocessing poster to a brochure. Ask your Komet specialist advisor.

Is your practice old enough?



Regina Regensburger

Dental hygienist, speaker on prophylaxis.

For several years, dental prophylaxis in elderly patients has been gaining in importance in dental practices. While this is far from being common practice for many senior citizens, most are open-minded on the subject. You just need to talk to them and point out the benefits. Quite simply, by clarifying the importance of prophylaxis for keeping teeth healthy for as long as possible. The objective in geriatric dentistry should be: avoiding caries and root neck caries, the long service life of restorations and the delay in periodontal problems.

Today, many elderly patients decide in favour of permanent dentures or implants. This is

why prophylaxis is becoming a more important element in addition to dental treatment such as prosthetic restorations and conservative therapy. This represents a special challenge for the dental team. We need to adjust to a delayed learning curve and limited implementation by the patients. We must also compensate for the deficits of domestic oral hygiene, motivate patients to cooperate and possibly even instruct care personnel. The recall intervals should be set to match the current case history. In addition

to professional care, individually selected oral hygiene products with the appropriate ingredients should be recommended to the individual patient. Only if the interplay between prophylaxis and domestic cooperation is guaranteed, can we achieve what all patients really want: to keep their own teeth into old age.

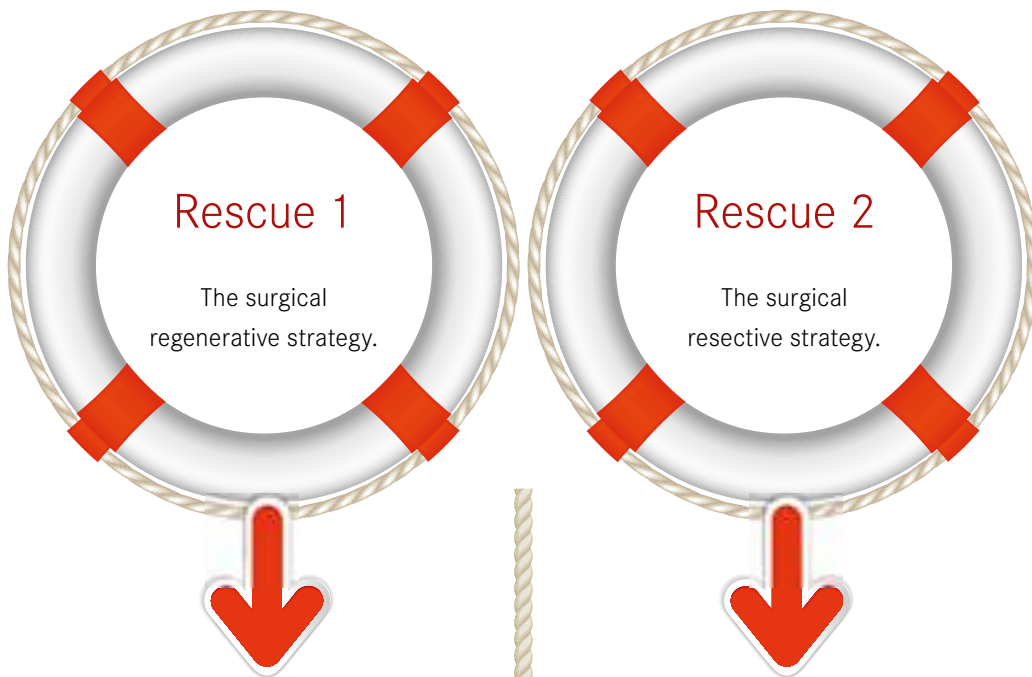


Prophylaxis: an important topic for elderly patients.

Implants in trouble.

Unfortunately, even implants aren't protected against dangerous deposits. As soon as they are diagnosed, they should be removed. The earlier this is done, the better the prognosis for saving the implant. The field of periimplantitis is still young, and only a limited number of

studies is available on this subject. This is why the expert guidelines of the implantology associations can help in choosing the right measures for saving implants. As a rule, there are two avenues you can follow. And for both directions you can find the right instruments at Komet.



Cleaning of the thread regions. When cleaning the delicate flanks and threads you require as many bristles as possible. The nickel-titanium brushes (fine-pointed and curved) contain over 40 extremely fine nickel-titanium wires. They adapt to the implant surface and are highly efficient in removing debris. Cleaning takes place in rotary mode in a contra-angle, whereby the NiTi bristles adapt perfectly to the implant surface. Suitable for pure titanium implants.



Set 4656

Treatment by means of implantoplasty. The implant surface is smoothed by cutting away the thread. Provided with extra fine toothing, these particularly long, egg or flame shaped instruments make the set 4656 ideally suited to this purpose. All instruments are mounted in a sterilisable, laser etched stainless steel bur block. The instruments with an overall length of 30 mm can reach deep regions with ease. Suitable for pure titanium implants.

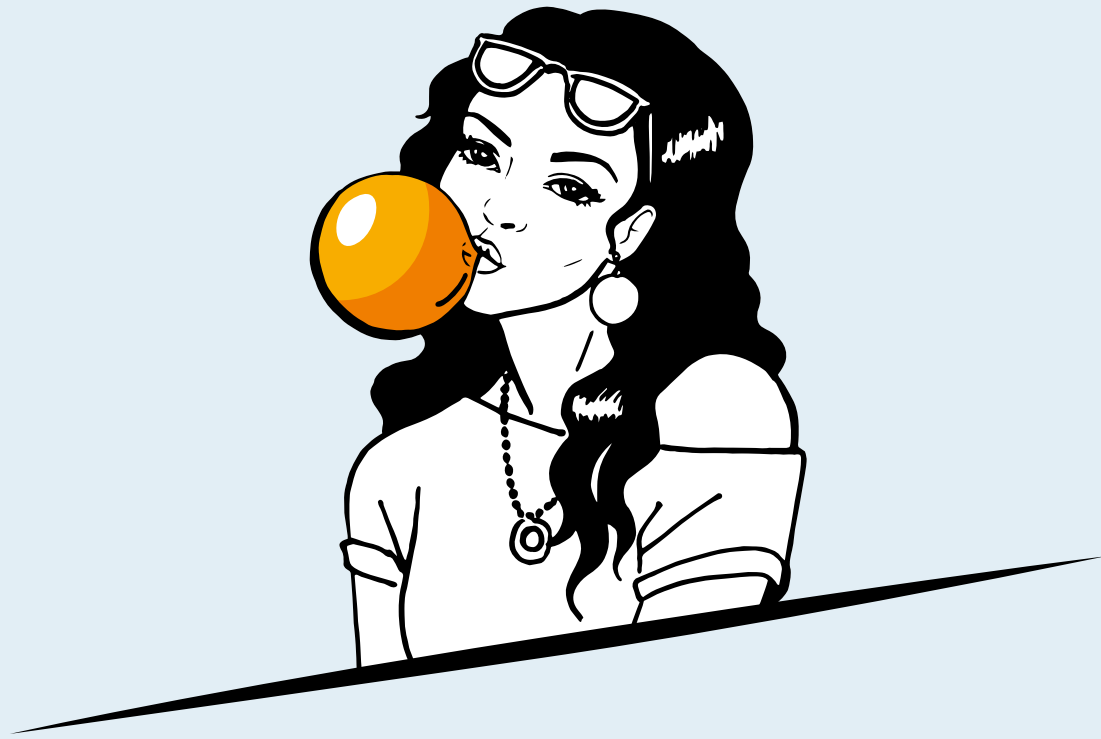


The cutting edge. A new generation, a new cut.

Komet's new generation of surgical bone cutters perfectly combines outstanding cutting efficiency with conservative preparation. The pioneering H162ST bone cutter features Komet's innovative, exceptionally sharp ST toothing for precise, controlled, rapid cutting. Small but strong with cross-cut toothing, the tapered H254E and

cylindrical H255E cutters deliver powerful, effective performance for optimal substance removal. Surgical bone cutters from Komet: Setting new standards with a new generation.





No more Bubble Trouble.

THE UNPOPULAR CLASSIC IN THE LABORATORY: THE BUBBLE TROUBLE. AND WHAT CAN BE DONE TO RESOLVE IT.

Unfortunately, bubble trouble and chipped areas in veneer ceramics appear time and time again. The devil really is in the details. In other words, there are a few minor details which need paying attention to during work, so as to avoid frustration later on.

And the main reasons are often more obvious than you might think. For example, if a crown or bridge is veneered with ceramic after casting, the metal surface needs to be prepared accordingly. Failure to do this could lead to an imperfect result.

In short, the bond between the metal framework and the veneer ceramic determines the later success or failure of the work. And also, of course, whether you will be dealing with a happy or dissatisfied patient and customer later on.

Porous oxide accumulations are a particularly well-disguised source of error. They contain large volumes of air. The air expands during ceramic firing and results in the unpopular bubble trouble in the veneer ceramic.

Another source of trouble is trapped residues of investment material. The residues are often difficult to spot with the naked eye alone. However, they will become more obvious later on as they permanently and negatively affect the entire bond.

Therefore, removal with the right tools is of enormous importance. And this raises the next question:

Which of the many rotary tools is the right one? Certainly not diamond burs or brown or pink stones. These might pull out bond-



ing particles which are then worked into the metal surface. During subsequent firing in the furnace, these are combusted and degas. To the detriment of the painstakingly applied ceramic.

Frameworks should therefore only be worked on with special tungsten carbide cutters.

Ideally always in one direction. If this is done



in all directions, this can lead to overlapping and air pockets. Komet has developed the DF carbide cutters specifically for this application. The

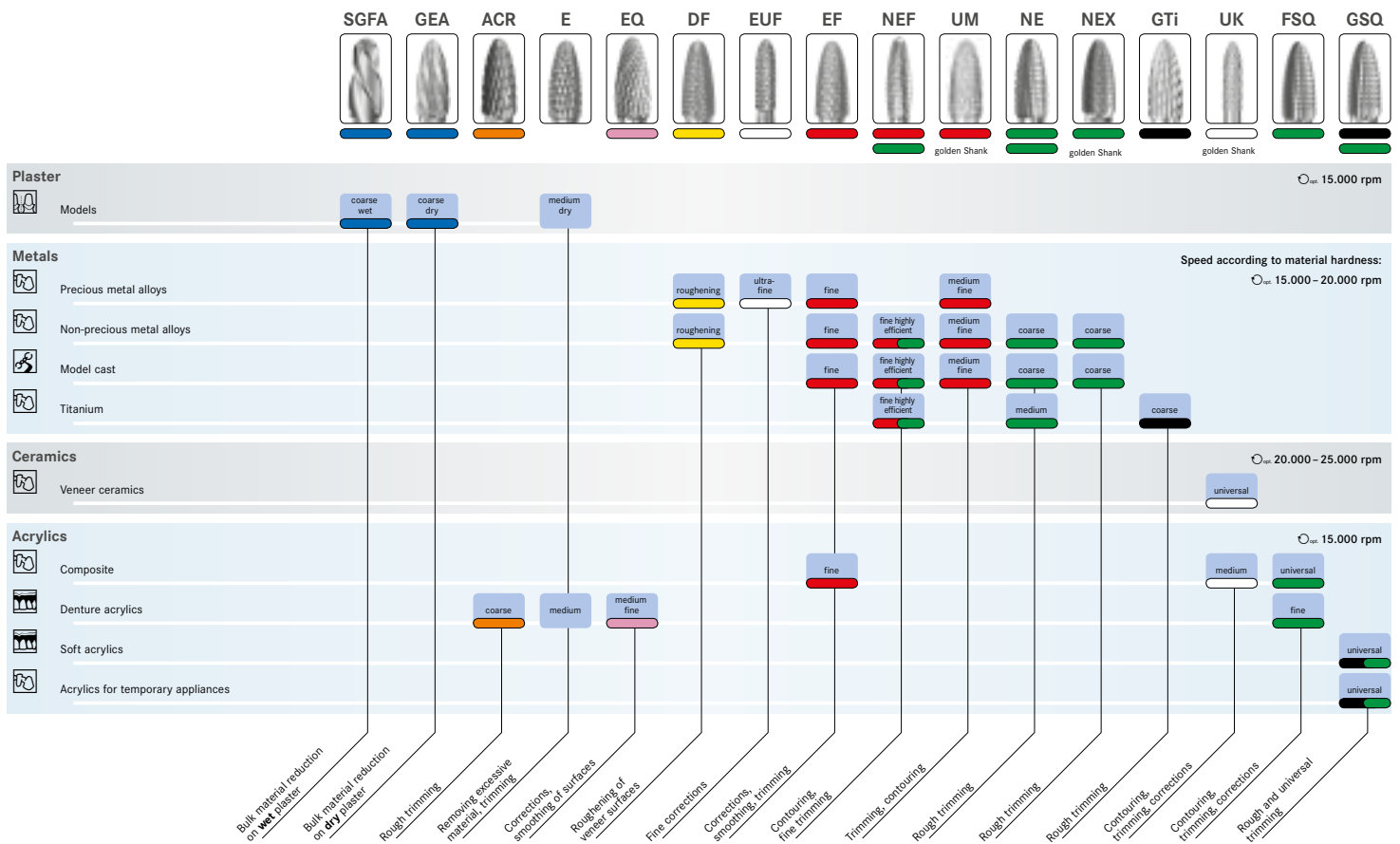
fine diamond toothing of the instruments creates perfect surface conditions and promotes controlled rough-



ening. In addition, the pyramid-shaped, tapered cutting tips create a larger surface on the metal which in turn has

a positive effect on the metal-ceramic bond. To prevent cross-contamination between alloy-foreign metals, creating your own tool sets is recommended.

Compass for everyday laboratory routines: which TC cutters for which material?



The safe way to the right post.

THE POST COMPASS FROM KOMET.

Which post for which indication? This is a question which often arises in daily practice, with a reliable answer from the Komet post compass. It navigates you through the plethora of post-endodontic restoration options with ease. Simply estimate the degree of damage to the tooth to be treated, and the compass will show you the root post which solves the problem perfectly.

The following criteria are important for a correct estimation: how severely is the tooth damaged horizontally or vertically? Does it involve a single-tooth restoration, a core build-up composite, a full ceramic or metal crown, a closed dentition? Or is it a bridge with partial dentition, a telescopic prosthesis or a model cast on crowns? What should you do in cases of bruxism?

To do justice to every indication, Komet has developed an entire post family with matching instruments for post space preparation: the ER system has been setting benchmarks in post-endodontic restoration for 30 years.

Single restoration: the level of damage decides.

This is where posts made of glass-fibre reinforced composite come into play, for example the fully coated ER DentinPost Coated. They are particularly suited to a less damaged tooth substance and intended for direct build-up. The glass-fibre reinforced composite material combines an elasticity module similar to dentine with high strength and aesthetics. An alternative is offered by the DentinPost X Coated, the first post with a shank length of only 6 mm. The short anchor depth keeps damage to the root to the absolute minimum. X stands for a pronounced retention head which makes it suitable for restorations of partially or deeply destroyed single teeth.

Pure titanium posts are used for severely damaged teeth, for example the ER TitanPost X Coated, which is the first titanium post with a tooth-coloured coating. These are extremely resilient and keep the restoration stable even if only little tooth substance is left.

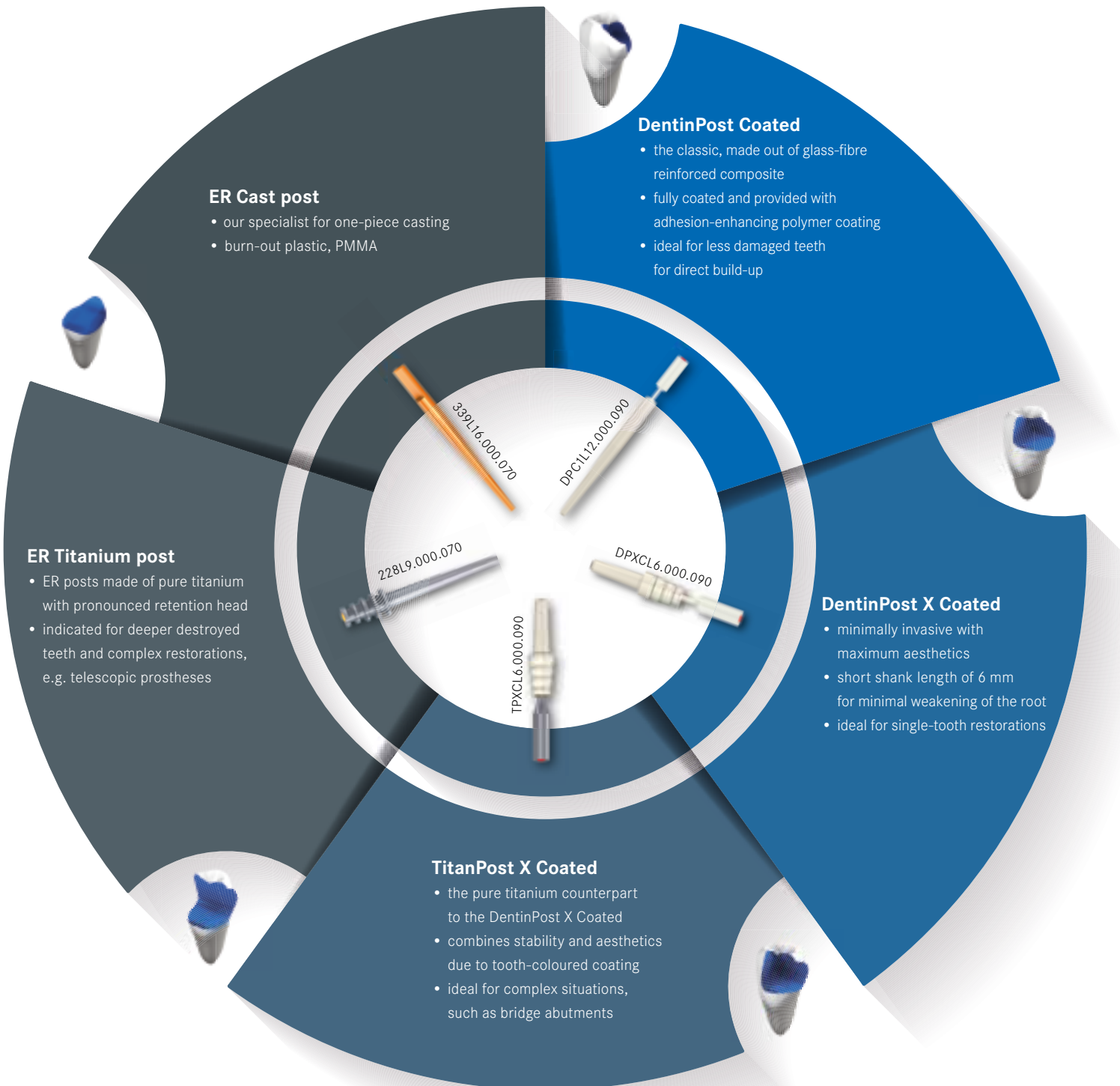
Trial of strength: the right post for bridges and telescopic prostheses.

Pure titanium posts are also recommended for this indication. As previously mentioned, the tooth-coloured TitanPost X Coated offers excellent retention because it is completely covered in silicate and silan and provided with an adhesion-enhancing polymer coating. Like the DentinPost X Coated, the TitanPost X Coated only has a shank length of 6 mm and therefore hardly weakens the root.

To achieve high strength and stability in severely destroyed teeth, it is also possible to use our CAST posts from the ER system for one-piece castings.

What to do in the case of bruxism.

Patients suffering from bruxism exert great force on the post design, which is why the use of titanium or other sufficiently stable metals is indicated. Posts made of fibre reinforced composite are less suitable.



Neil Armstrong



Alexander von Humboldt



Christopher Columbus

The explorer among
the discoverers.



James Cook

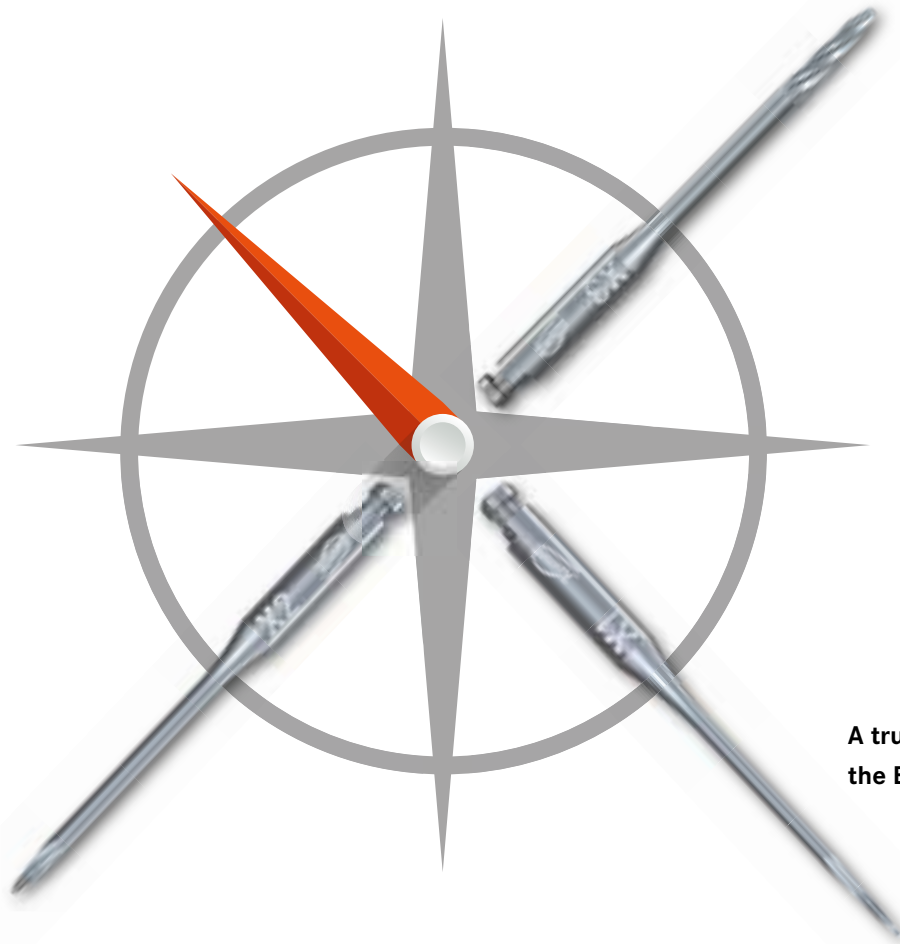
The big discoveries of our time often take place in small steps. Just a few years ago, the discovery of minimally invasive treatment still represented new territories in dentistry. Especially in the field of endodontics.

The careful preparation of the access and petite design of the trepanation opening will retain the highest level of tooth substance. This increases the chances of long-term treatment success by minimizing the risk of tooth and root fractures.

The EndoExplorers are a revolutionary invention and set new benchmarks. The instrument design of the EndoExplorers is ideal for dentists who work with microscopes or other visual aids. The delicate

design of the instrument heads and the long, slim instrument neck allow complete visual control of the work area at all times under microscopes with up to 20x magnification.

The tapered design of the instrument heads is of great benefit to the dentist because it allows perfectly controlled work and precisely targeted substance removal. This preserves valuable dentine and improves the long-term prognosis for endodontically treated teeth. And another advantage: the EndoExplorers are made of tungsten carbide up to the shank. This guarantees maximum concentricity, even after repeated use, thereby allowing perfectly controlled and precise work.



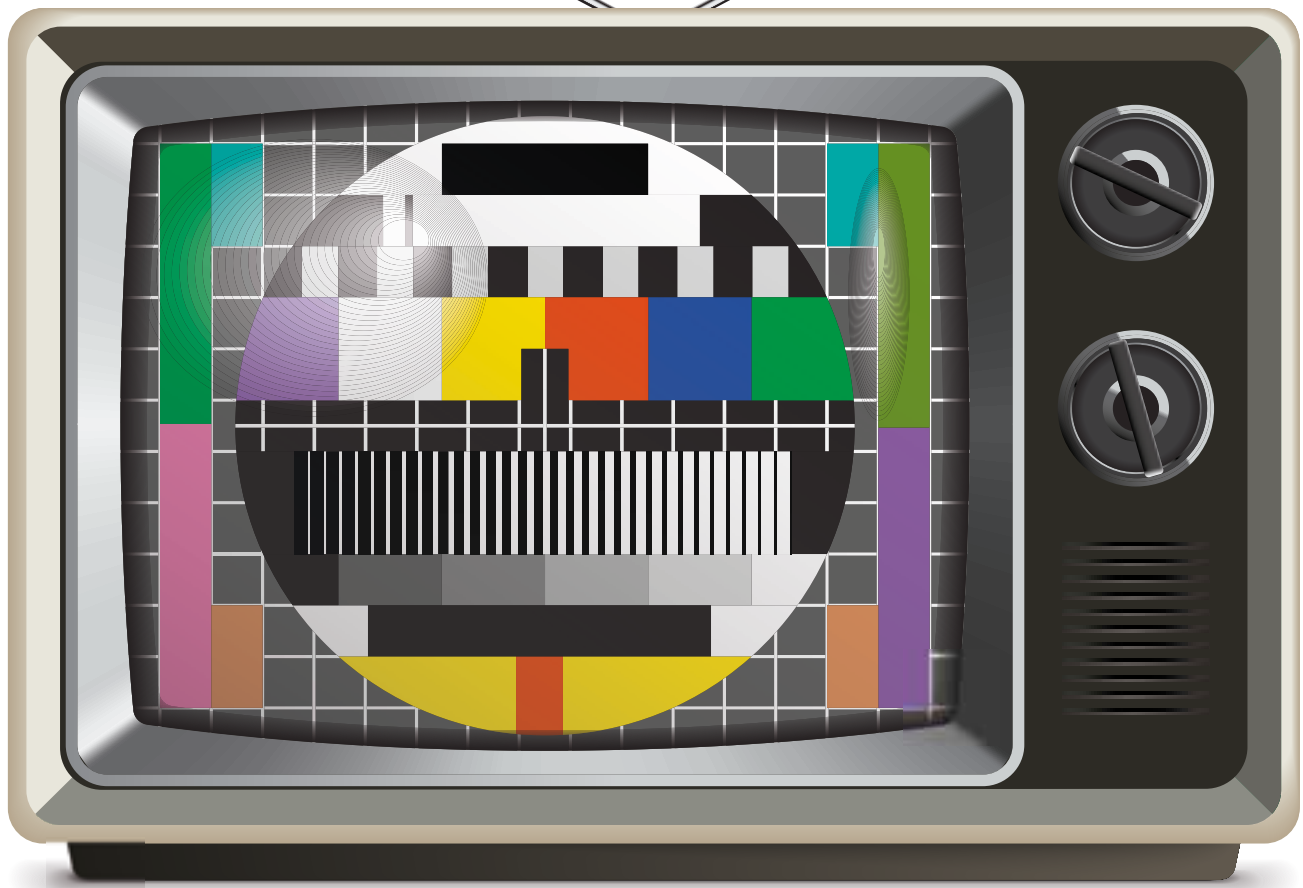
**A true discovery:
the EndoExplorer.**

Dr. Hans-Willi Herrmann is a specialist in endodontics with a practice in Bad Kreuznach, Germany. He has made a great contribution to the development of the explorer in cooperation with Komet.

“Minimally invasive endodontology is the current buzzword. However, the fact that this is not a revolutionary new treatment is often overlooked: the aspiration to achieve

the maximum preservation of the tooth substance has always been a fundamental part of dedicated dentistry. Until now, however, we have been unable to put this goal into practice. With the combination of EndoTracer and EndoExplorer instruments and the use of adequate visual aids, practitioners are now given the means for designing the required endodontic access according to the principle

“as small as possible, as large as necessary” whilst preserving as much substance as possible. And they can achieve this without having to limit or let alone compromise the use of the subsequently used root canal instruments. Both instrument types have secured their well-deserved place in our “endo workflow” and have become an indispensable part of our daily work.”



Get the Perfect Picture.

THE SEARCH IS OVER WITH THE ENDOTRACER.

He who seeks, will find. In the case of multi-root teeth it is not always possible to immediately find and penetrate all the root canals of a tooth requiring endodontic treatment. In many cases an isthmus must first be created over a part or the entire length in order to find a hidden canal. And this is exactly where the EndoTracer comes into its own. With this



EndoTracer

instrument, you always have an endo specialist at hand for isthmus preparation. Thanks to its specially adapted design, with a length of 34 mm, the EndoTracer has an even longer neck. This enables an excellent view past the instrument into the access cavity and is therefore ideal for work under the microscope. This enables an unobstructed view into the deeper

cavity areas. This facilitates the exposure of the pulp chamber floor anatomy, the substance-preserving opening of the root canal entrances and exposure of the obliterated canals. The EndoTracer is

available in 2 lengths – 31 mm and 34 mm – and in 6 sizes each – 004, 006, 008, 010, 012, 014 –, so that a suitable instrument is available for every clinical situation.



YES, WE'RE OPEN(ER).

Open to something new? Everyone automatically reaches for their favourite instrument, especially when preparing canals. But sometimes rethinking leads to a new favourite instrument and to a better preparation result. Did you know that the majority of bacteria are located in the upper third of the canal and that – without using an opener – these are easily transported in apical direction

with subsequent files? This can easily be avoided by simply using an opener. When used in the coronal third, it removes the majority of bacteria in the canal right at the beginning of the treatment. The canal access area is expanded with only one file, creating a better view as well as relieving the strain on the subsequent file system. By the way, no matter which files you use for subsequent

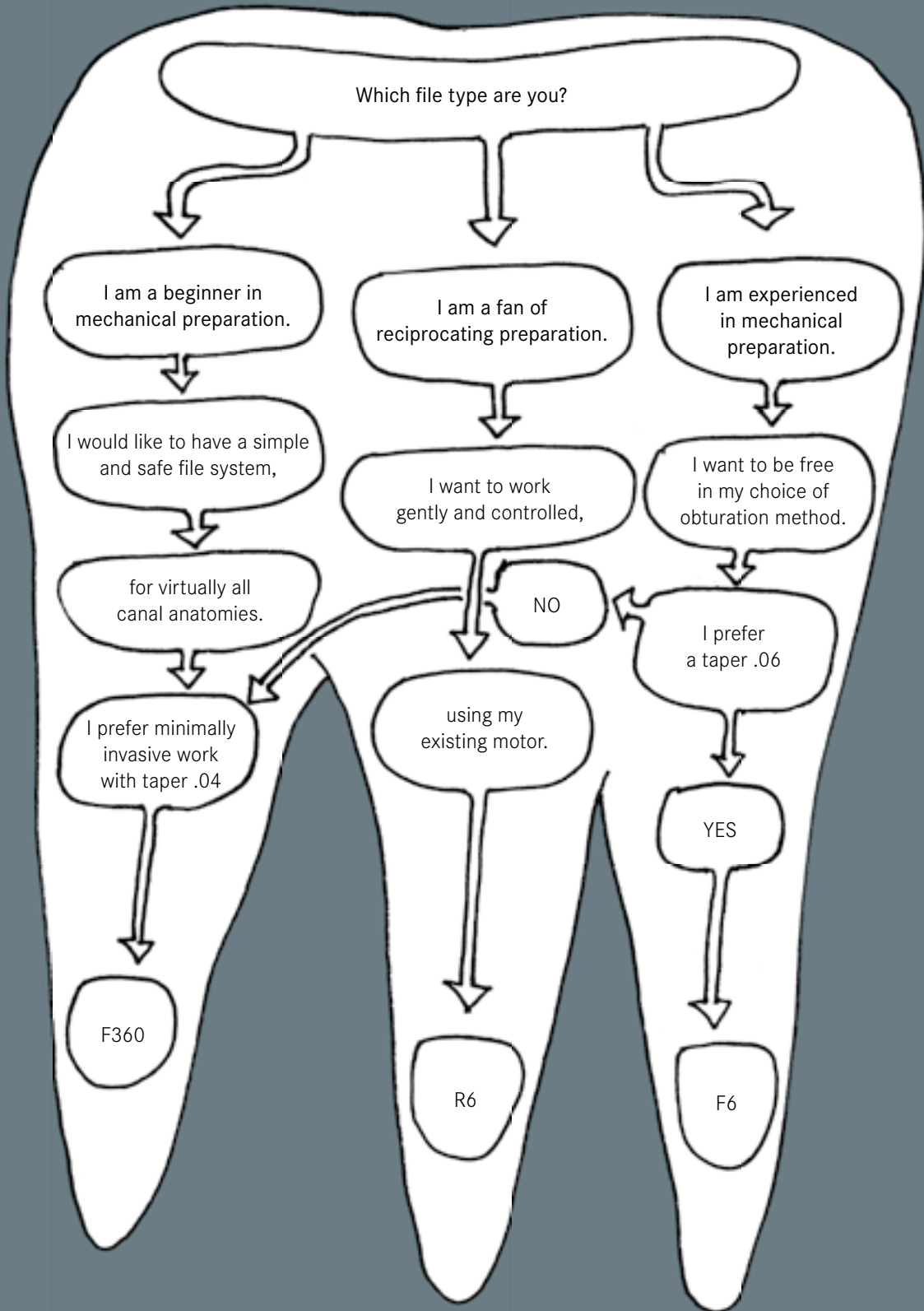
preparation, the opener is flexible in every aspect and can therefore be combined with any system.

OP10L19 with taper .10 and a length of 19 mm is the all-rounder and also available as a shorter version in L15 for hard-to-reach areas. The Opener is also available with a smaller taper .08 – OP08L19 – for narrower canals.



Opener

YOU HAVE THE STYLE. WE'VE GOT THE FILE.



Finding the right one.

F360



F6 SkyTaper



You already know the good news: a lot has happened in recent years in the field of mechanical root canal preparation, the file systems have become safer, simpler and more effective. But the bad news is: the range of products has exploded to such an extent, that it is easy to lose your sense of focus. The brief file navigator on the opposite page may be of assistance here. It shows you at a glance which Komet system matches which work style. And how to reach your goal as easily as possible: to achieve a perfect preparation outcome.

Endo, simple and safe: F360. This 2-file system is suited perfectly for beginners to mechanical root canal preparation. It can be used in virtually any canal anatomy, and is also minimally invasive due to taper .04.

One file for virtually everything: F6 SkyTaper. The majority of root canals can be prepared with this file. Thanks to its taper .06, the F6 SkyTaper gives you all the options for choosing the right obturation method.

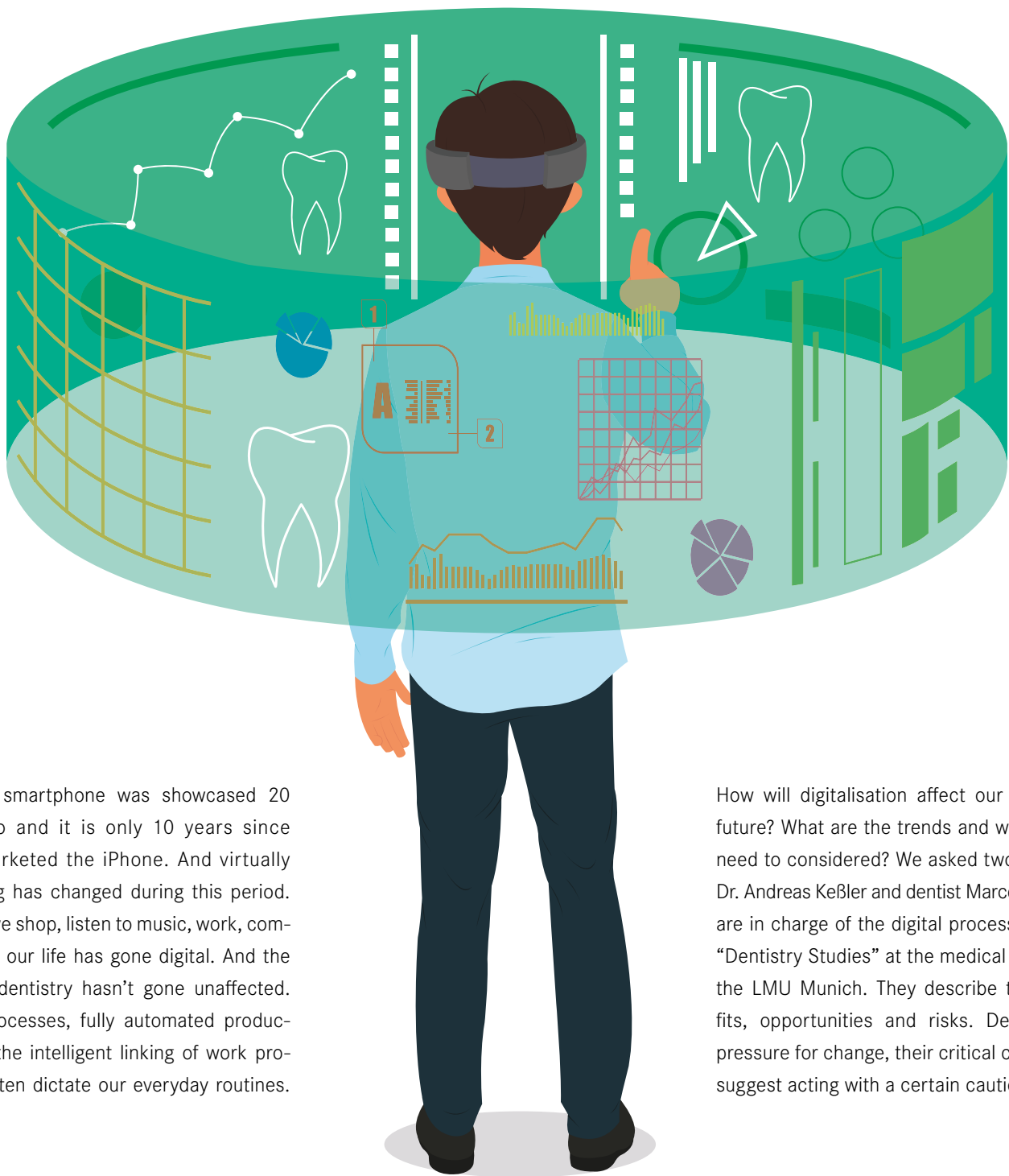
R6 ReziFlow

Fewer cutting edges, more control: R6 ReziFlow. The design of the instrument is adapted perfectly to reciprocating motions. Equipped with fewer cutting edges, the file greatly reduces the screw-in effect known from other reciprocating file systems. The 1-file nickel-titanium system provides perceptible gentleness and full control during work. To respond to every canal anatomy, the R6 ReziFlow is available in six sizes and three lengths. The main sizes 025 – 040 have a taper .06, the additional sizes 045 – 050 have a taper .04 to provide sufficient flexibility. The consistent taper which matches the instrument size, offers excellent conditions for gentle preparation and homogeneous filling. R6 ReziFlow cuts to the left, which makes it suitable for use in all conventional, reciprocating motors.



Digidental.

TWO WORLDS MOVING EVER CLOSER TOGETHER:
DIGITALISATION IN DENTISTRY.



The first smartphone was showcased 20 years ago and it is only 10 years since Apple marketed the iPhone. And virtually everything has changed during this period. The way we shop, listen to music, work, communicate: our life has gone digital. And the world of dentistry hasn't gone unaffected. Digital processes, fully automated production and the intelligent linking of work processes often dictate our everyday routines.

How will digitalisation affect our sector in future? What are the trends and which risks need to be considered? We asked two experts: Dr. Andreas Keßler and dentist Marcel Reymus are in charge of the digital processes in the "Dentistry Studies" at the medical faculty of the LMU Munich. They describe the benefits, opportunities and risks. Despite the pressure for change, their critical comments suggest acting with a certain caution.

So, where do we stand today?

Digital support at dental workplaces is an established standard. In addition, many areas of work in dental practices are now digitalised, for example, X-rays, documentation or endometrics. The resulting advantages are considerable. Many work steps have become easier and more reproducible, sometimes even more precise. New manufacturing options allow the use of innovative materials. In some areas, digital imaging reduced radiation exposure and made surgical processes easier to plan. As in many practices and laboratories, digital X-rays, paperless documentation, three-dimensional surgery planning or CAD/CAM supported fabrication of dentures are a part of daily business at the LMU in Munich. However, the discussion on “Digitalisation” should not be governed solely by blind trust in progress and marketing promises. Challenges lie ahead!

1. One relies more and more on technical processes where the algorithms are difficult to understand by users.
2. Little attention is often paid to data protection. Sensitive patient information needs to be better protected to avoid data theft or data loss.
3. Switching to a digital workflow involves high procurement, training and maintenance costs. Depending on the supplier, closed systems, modular design of the system components and fee-based updates one can quickly become dependent.
4. Manual dental skills may be lost long-term through semi-automated industrialised fabrication.

If these critical aspects are addressed sufficiently, then digital technologies can prove to be sustainable and successful in terms of high quality use.



ZA Marcel Reymus

Germany is one of the most digitalised countries in the field of dentistry. This is evident, among other things, by the large number of CAD/CAM systems in practices, universities and dental laboratories. In addition, many of the leading manufacturers and pioneers on the market come from the German-speaking world.



Dr. Andreas Keßler

What are the next steps?

The next step in “digital workflows” will be extensive data transfer between the practice and the laboratory. At present, dentists often refrain from intraoral imaging, especially if no chairside treatment is planned. Many dentists are discouraged by the flat learning curve with a high initial investment in time as well as the still limited accuracy for large scan areas. Although guided scan procedures as a prerequisite for standard use may sound interesting, one should not forget that the focus is on the patient as a human being. In general terms, digitalisation is associated with a high investment volume. How soon the complete digital workflow will become standard in practices is simply a question of cost. All these costs can only be amortised by the work of a dentist’s hands, embedded in a conservative remuneration system which is focussed on neutralising costs but not on compromising the optimal treatment.

A beautiful digital world?!

The trend which has been evident over the past few years in the fabrication of prosthetic restorations will continue. Dentures will increasingly be fabricated with CAD/CAM support. However, the experience, fabrication skills and the creativity of the dental technician remain essential. For dentists in general practice, new devices with user-friendly interfaces will prove to be a daily help at many levels. Linking various digital equipment (DVT, facial scan, intraoral scanner, design software) will result in a consolidation with partial fields in dentistry (tooth preservation, prosthetics, surgery). The digital approach has the potential of making treatment methods more efficient. A current research project at the LMU is 3D-printing of dental auxiliary structures (e.g. impression trays, drilling templates, splints). In particular, the development of new processes and application options beyond the already standard indications are of interest.

Enormous development opportunities can be observed in the field of software. More attention needs to be paid to software ergonomics in future. The users are not interested in having to adapt to a new interface for every update. Continuity is the key here. The term “intuitive operation” is often a misnomer. The user should not be forced from one click to the next. Rather, “intuitive” means that the overall concept is understood without having to read a manual. In this respect, the dental software companies still have some homework to do. Solutions for open interfaces are important. Potential users will

hold back as long as there is apparent dependency. Companies need to recognise this and create trust! If company brochures only contain attractive photos and empty phrases with only a few technical facts, then this feeling of unease will persist in users.

The necessity of having to contact the hotline of large companies – usually subject to charge – and to hope that help is available, amply demonstrates where the largest development potential exists.

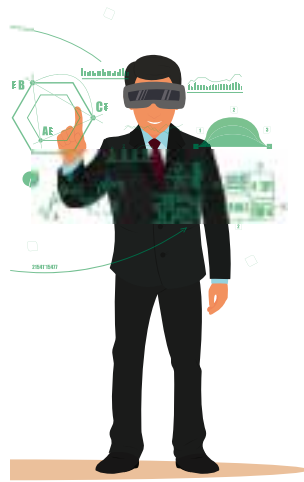


Digitalisation as part of teaching at the LMU

The students at the LMU are trained on a practically-oriented and forward looking basis. This is why digital processes are included in the university curriculum. During preclinicals, the students fabricate a crown using a labside process. A chairside restoration is simulated on phantom patients during the phantom course. In clinical courses, intraoral imaging for the restoration of single crowns will be standard. The theoretical section of computer-guided dentistry is taught in an online lecture with teaching videos and numerous practical tips. The reaction of the students to the new technologies is positive throughout. Having been brought up with smartphones and computers, they find it easy to comprehend digital processes and integrate them in their work.

Nicole Richter, student of dentistry

We learn how to handle digital processes as well as conventional methods. CAD/CAM is also becoming a major topic for us. We have been using it since we started our studies, but we also learn how crowns are made in the laboratory. Being able to fabricate and insert a crown during a chairside session is very impressive. However, nobody should underestimate the work of a good dental technician. And of course I will be using most of the technologies myself in the practice. In our generation you will hardly find anyone who is actively opposed to all these innovations. And we, too, will always be faced with new technologies. Digitalisation is changing the world. The “art” seems to be to grow with the technology.



Living reality, virtual reality

Digitalisation cannot be stopped. It will have a major influence on dentistry in future. However: dentists work with people - with people who have anxieties, and people who differ in terms of their behaviour, their oral health and their genetic make-up. Despite all the science fiction visions and marketing promises, it will not be possible to do justice to this individuality with machines alone. The intellect and creativity of real people is required.

Whether smartphone, CAD/CAM, digital impression taking, digital X-ray or digital communication - there is a constant factor in all the

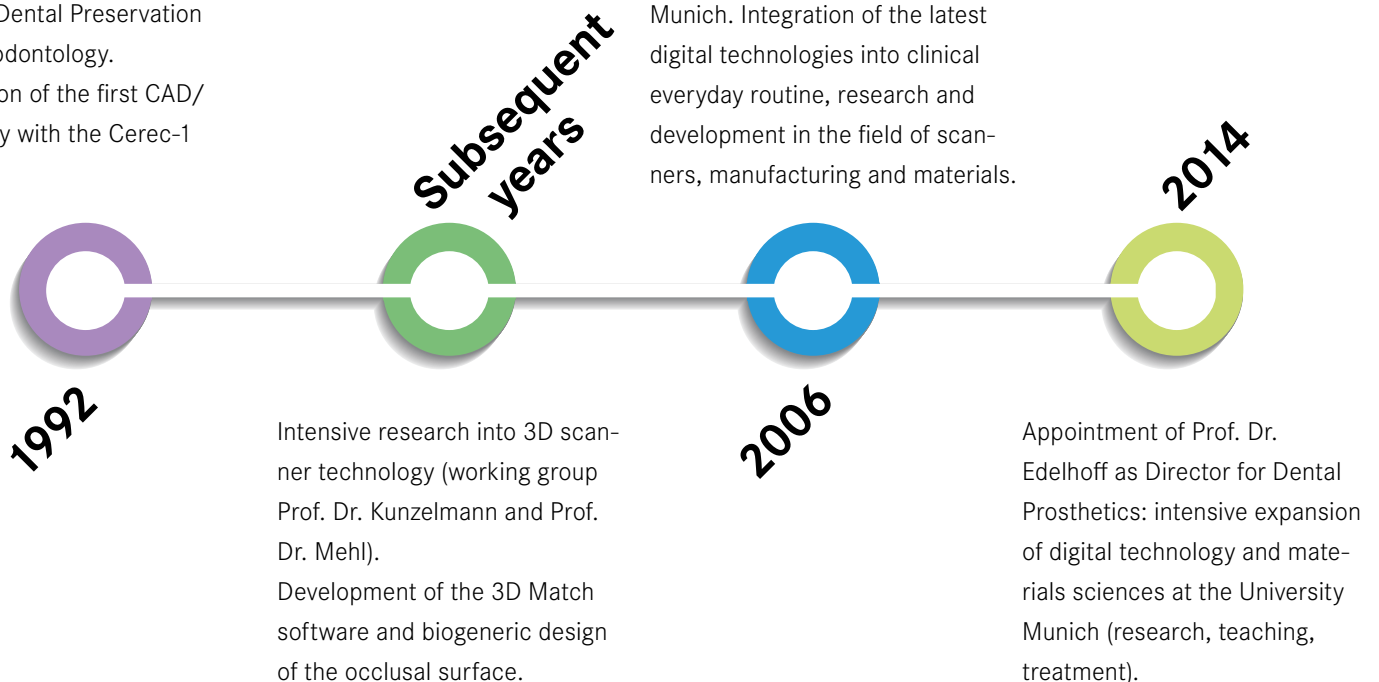
change: quality pays! Precise working methods and striving for sustainability are rewarded in the long run.

Komet Dental is also very active in terms of digitalisation in the dental practice and laboratory. The Lemgo-based company pursues practically-oriented concepts to assist dentists and dental technicians on the path to their individual digital world. Exciting and entertaining insights into the new digital reality can be experienced at the IDS 2017 stand of Komet Dental: with the exclusive Komet Virtual Reality Game - with which the company underlines its innovative power.

Pioneers: digitalisation at Munich University.

Prof. Dr. Hickel takes on the Chair of Dental Preservation and Periodontology. Fabrication of the first CAD/CAM inlay with the Cerec-1 system.

Conversion of the Dental Clinic Munich. Integration of the latest digital technologies into clinical everyday routine, research and development in the field of scanners, manufacturing and materials.



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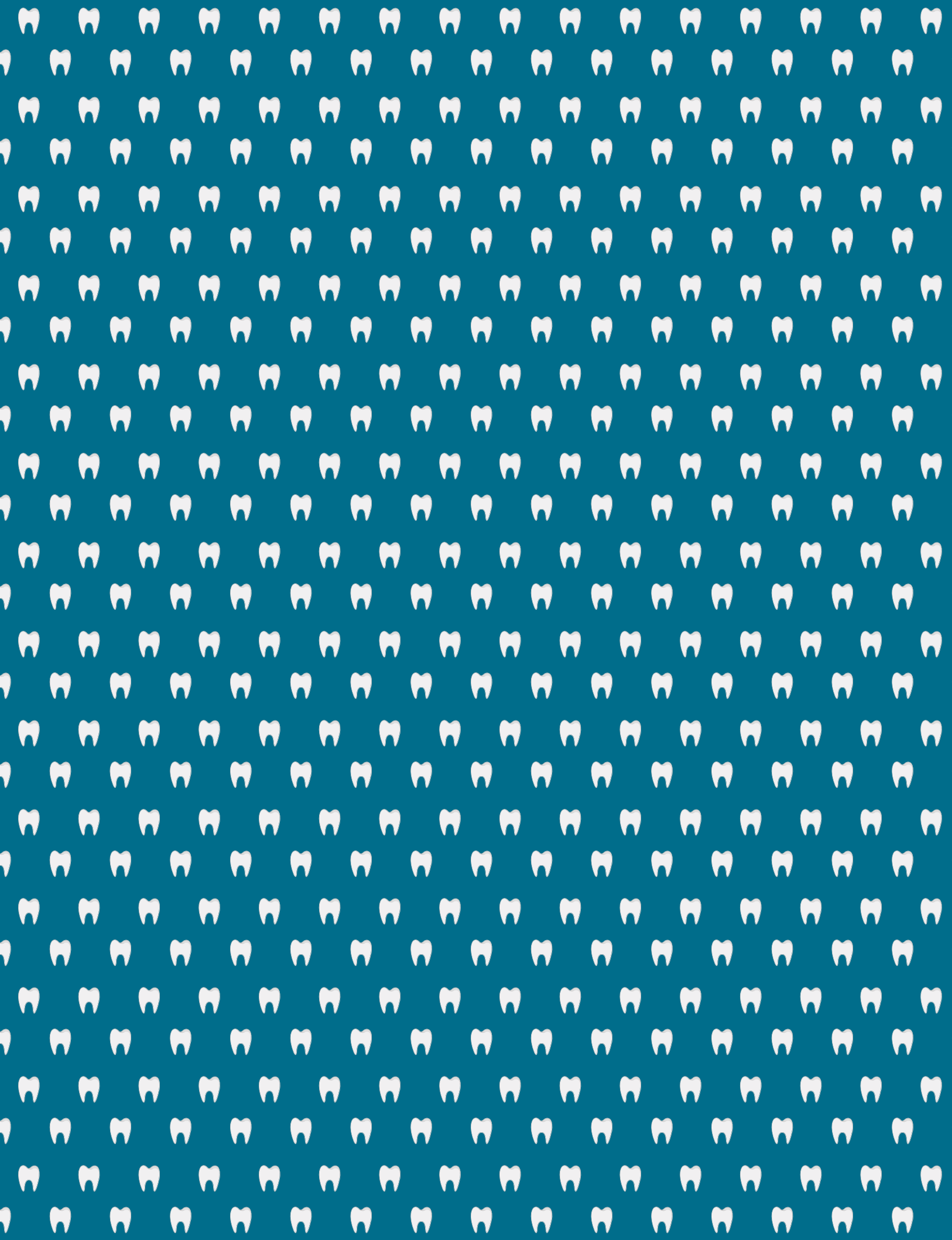
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