



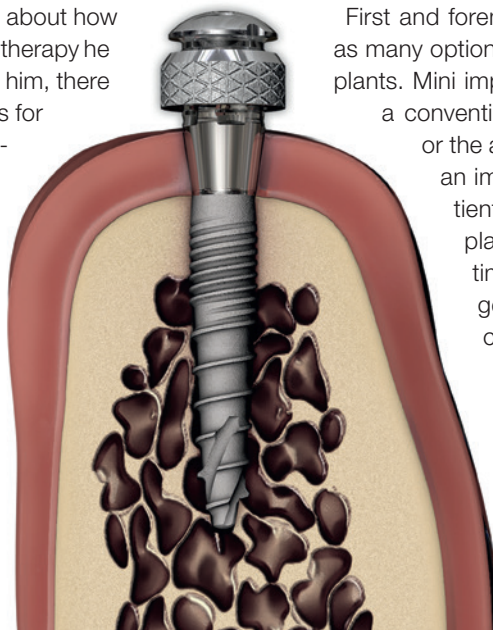
Jan Kielhorn

“Mini implants can be used in cases where a conventional system would be problematic or the amount of preparation prior to fitting an implant would be too high.”

## Mini in size, high in standard

**Jan Kielhorn from Öhringen**, a town in the Southwest of Germany, is a dentist specialising in oral surgery. In this interview, he talks about how he has extended the spectrum of therapy he offers, by using mini implants. To him, there are several convincing arguments for mini implants offering an alternative to standard implants, especially when a minimally invasive solution is required. He has spent the past few months working with the implant system CITO mini® (Dentaurum Implants) and thus presents what advantages these mini implants have to offer and why he prefers to use this system rather than others.

**Fig. 1:** Cross section of a jaw with CITO mini® implant and fitting matrix.



**Mr Kielhorn, why have you chosen to establish mini implants as part of your treatment concept?**

First and foremost, I wanted to offer my patients as many options as possible when it comes to implants. Mini implants can be used in cases where a conventional system would be problematic or the amount of preparation prior to fitting an implant would be too high. Many patients consult my practice wanting implant rehabilitation but, at the same time, wanting to avoid extensive surgery. In such cases, I can offer them comparatively minor surgical intervention by using mini implants.

**Which indications warrant the use of mini implants?**

The classic case is when a complete denture needs fixing, but there is a wide range of options. A modern implant system can cover many indi-

cations, for example when the number of abutments needs to be strategically increased in order to retain partial dentures. If teeth already display periodontal damage or have undergone endodontic treatment, it makes sense to insert mini implants, for example if the dorsal arch is shortened. Mini implants can help to avoid any lever action on the terminal abutment teeth. They can also be used in cases of reduced remaining dentition. Often, only a few implants are required to return stability to existing dentures. Moreover, mini implants are often used as an intermediate solution in the course of conventional implant therapy.

#### What did you find convincing about CITO mini® implants?

The fact that the system is very similar to modern standard implants, yet they are one-piece mini implants. Their characteristics are practically equivalent to standard implants, and they can be safely used for the above-mentioned indications.

#### What exactly are the advantages in comparison to other mini implants?

Work with a professional kit is important to me—this implant system offers just that. The implants are delivered in gamma-sterilised double packaging. They can be removed from the packaging contact-free using an insertion key (PentaGrip) and can then be inserted either with a manual or a power-assisted intermediate handpiece. The self-tapping thread ensures atraumatic implant insertion at a steady insertion torque, as well as high primary stability. The external geometry of the implant is cylindrical/conical, so we can assume a uniform, gentle loading of the bone avoiding local overloading and tension peaks that might damage the bone.

#### How are the prosthetic components connected?

By means of a ball abutment—a tried-and-tested technique. The abutment of this one-piece implant serves as a matrix. Configured O-ring matrices are offered to fit onto the matrix, thus ensuring a stable connection between

implants and tooth-borne telescopic restorations. The force needed to remove the denture is similar to that of a telescopic crown. Another advantage is that depending on the indication and the amount of work that can be involved, a choice can be made between direct processing (without models or laboratory implant) and indirect processing (in a laboratory).

#### How important is the implant surface to you?

Very important, since it greatly determines successful osseointegration. In the case of CITO mini® the implant surface is inspired by two-piece implant systems. In the osseous region, the implant surface is blasted, etched and adapted to the cellular structure of the bone. In the shoulder region, the implant is polished favouring gingival apposition. Summarising, it can be said, that the mini implant I use, can in many ways be compared to a conventional system. As a user, I have a professional kit at my disposal which I can offer my patients as an adequate alternative to a standard implant—it is an ideal addition to the daily implantological practice.

Thanks for this interview, Mr Kielhorn.

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