

## Technological Advances

Selective laser sintering (SLS) is not a new technology, but its application in orthodontic appliance manufacturing has become relevant very recently. SLS has seen applications in the crown, bridge and removable partial denture spaces for years, where it has been used to manufacture frameworks. The process uses a thin bed of cobalt-chrome (CoCr) powder spread over a metal build plate. Then, a laser selectively melts each layer of the intended device, fusing it to the previous layer.



Once the parts have been grown, significant processing is required before they are ready for delivery. After a stress relief process, the parts are separated from the build plate and support structures are removed. In summary, the overall quality of an appliance with sintered components is superior to traditionally banded devices.

### Don't have a scanner? No Problem!



You take the impressions



We convert them into STL files for you



We fabricate the appliance



You deliver it to patients with a perfect fit

Contact us today for more information on our sintered appliances and how we can help facilitate your workflow and save you time.



RICOH ORTHODONTIC APPLIANCES

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*The future of banded appliances is here!*



*No Separators  
No Band Fitting  
Perfect Fit*

# LASER SINTERED APPLIANCES

## Introducing Sintered Appliances

We are proud to introduce our new 3D printed bands. Improving appliance accuracy by removing the sub-gingival guess work, resulting in:

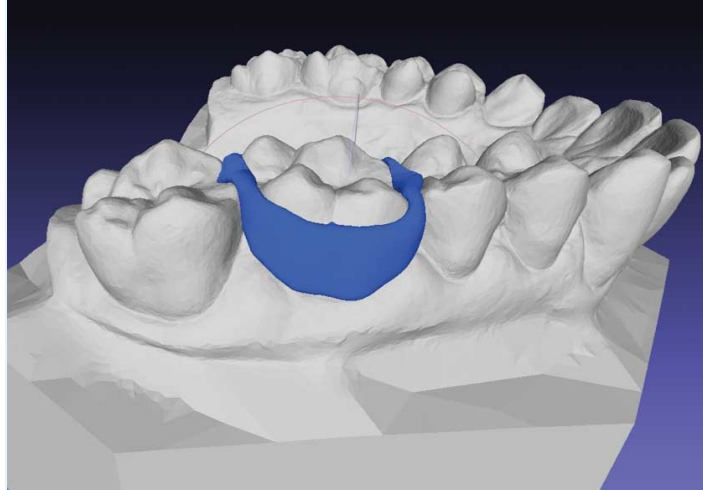
-  **Less chair time**
-  **Greater accuracy**
-  **Fewer appointments**
-  **Happier patients**

We strive to streamline your workflow and limit redundancies to keep your practice moving forward. That's why we've created a 3D printed appliance that optimizes your intra oral scan and takes the guesswork out of what's happening beneath the gum line—by removing “subgingival” from the equation altogether. As a result, you'll get a more accurate appliance each and every time.



***Digital appliance design is the future of lab work, and laser sintering is the future of metal orthodontic appliances.***

Sintering can be wielded to fabricate entire space maintainers, bonded lingual retainers, expander frameworks and any other component requiring rigidity and strength. Any components requiring precise placement in relation to tissue can be designed to stay low-profile while avoiding impingement. Additionally, any traditional components assembled onto a sintered framework are easily laser-welded, ensuring a strong connection.



## Laser-Sintered Appliances Improve Clinical Workflow

When a band does not require access to interproximal areas, the separation step can be excluded. For many practices, this is a separate appointment, and for some there are separate appointments for both band fit and seating of the final appliance. Eliminating this step yields an immediate improvement in workflow and patient scheduling.

While removing separation appointments creates a predictable time benefit to all involved, there is also a marked improvement to chair time in the aggregate when considering appliance fit improvements. A band designed from scans which only engages visible anatomy creates a very streamlined bonding appointment with far greater consistency and less time lost to salvaging ill-fitting appliances.

### Appointment 1

3D scan. No separators required.

### Appointment 2

Fit appliance with **99.9%** accuracy!

## Benefits of Laser-Sintered Appliances

The benefits of sintered metal appliances are clear for doctors and patients, but these also extend to the labs fabricating the devices. Competitive labs have adapted to advancing technologies, developing technical expertise in these areas and leveraging their experience with traditional appliances to create unique offerings.

***The overall quality of an appliance with sintered components is superior to traditionally banded devices***



Fabrication consistency is high and digital appliance records can be kept indefinitely for remake. Design parameters of appliances can be controlled more objectively, and in some cases quantified—creating better communication between labs and doctors. Highly technical elements are reallocated to the digital design portion of the workflow, providing opportunities for work to be done remotely.

**Reduce chair time and unnecessary follow-up appointments.**

**Your patients will thank you for it!**

Contact us today for more information on our sintered appliances and how we can help facilitate your workflow and save you time.