

# OsseoSpeed®

## —more bone more rapidly

### What is OsseoSpeed?

OsseoSpeed is a moderately rough implant surface derived from a titanium grit blasted surface (TiOblast) with an additional chemical treatment. The surface characteristics show on incorporation of small amounts of fluoride ions into the titanium oxide layer<sup>1-7</sup>, a distinct microscale pattern and a unique nanoscale topography<sup>1, 2, 4, 8-12</sup>. Chemical and physical properties of the OsseoSpeed surface have been reported elsewhere<sup>1, 3, 8, 10, 11, 13-20</sup>.

The OsseoSpeed surface was introduced 2004 on the Astra Tech Implant System.

### Extensive scientific evidence

Numerous publications have reported similar<sup>21-24</sup> or increased bone formation and stronger bone-to-implant contact at the OsseoSpeed surface compared to its ancestors<sup>25-32</sup> (TiOblast and machined titanium surfaces) at shorter healing times<sup>33-35</sup>, results which are also confirmed through human histology analyses<sup>36-39</sup>. The performance of OsseoSpeed is documented in various experimental models with different focuses:

*In vivo* models<sup>6, 40-64</sup>

*In vitro* models<sup>15, 20, 65-67</sup>

### Improved osseointegration

Factors such as enhanced osteoblast differentiation<sup>2, 7, 25, 66, 68, 69</sup>, biocompatibility<sup>15, 70-72</sup> and thrombogenic properties of the OsseoSpeed surface have been attributed to the improved and more rapid osseointegration.

For information on OsseoSpeed Astra Tech Implant System in clinical use, please refer to [www.dentsplysirona.com/implants](http://www.dentsplysirona.com/implants)

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