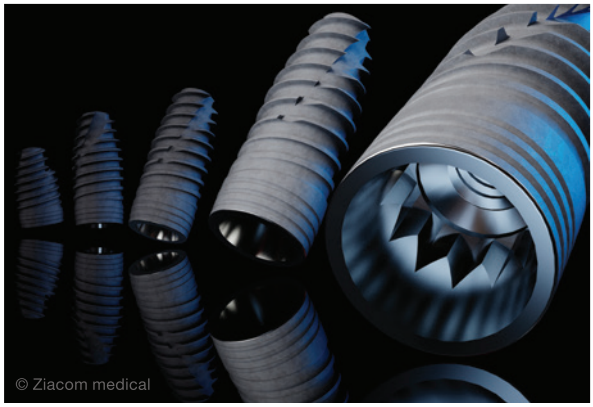
Ziacom

Enhanced conical connection design for surgical control, bone preservation and stability

The ZM10 implant system by Ziacom is a high-performance conical connection implant designed to meet clinical demands for surgical precision, mechanical strength, and biological compatibility. It integrates a prosthetic-level conical connection with a unique macro and micromorphological body, enabling optimal primary stability, reduced crestal stress, and predictable long-term outcomes.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At the material level, the ZM10 is manufactured from Zitium, a proprietary extra high-strength Grade 4 titanium. This formulation significantly enhances the implant's yield strength and fatigue resistance, ensuring structural integrity under high functional loads, and increasing safety during immediate loading protocols or in compromised bone scenarios.

The implant body features a tapered macromorphology with a reverse conical design at the crestal region. This reverse taper reduces pressure on the cortical bone during insertion, minimising marginal bone resorption and preserving the crestal ridge. Additionally, the cervical region incorporates micro-rings that facilitate the guidance of new bone tissue, enhancing biological integration and improving the long-term anchorage of the implant.

The threading design is one of the most distinctive elements of the ZM10. It features a double-threaded, low-angle active thread with variable geometry. Coronally, the threads begin as wide trapezoidal profiles that maximise initial bone engagement. As the threads progress apically, they become narrower and V-shaped, enabling smoother insertion and better torque control. This configuration increases the bone-to-implant contact (BIC), which enhances primary stability and promotes efficient osseointegration, even in low-density bone or post-extraction sockets.

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At the apical end, the implant includes an active, self-tapping, and atraumatic apex. This design element provides controlled advancement during insertion, particularly in soft bone, and helps prevent lateral or apical displacement. It contributes significantly to achieving primary stability, which is essential for both immediate and delayed loading protocols.

The internal conical connection, set at 11 degrees with a dual internal hex, provides a strong and stable implant–abutment interface. This minimises micromovements and bacterial microleakage at the connection, reducing the risk of peri-implantitis. Importantly, all implant diameters share a single prosthetic platform, simplifying component selection, reducing inventory, and streamlining prosthetic workflows—especially advantageous in busy clinical environments.

Clinically, the ZM10's combination of features—reverse conical neck, optimised thread design, atraumatic apex, and robust internal connection—offers numerous advantages. These include reduced marginal bone loss, enhanced mechanical stability, simplified restorative procedures, and long-term biological sealing. Together, these elements contribute to the reliability, efficiency, and predictability of implant treatments across a wide range of clinical scenarios.

In summary, the ZM10 implant system delivers high-level performance in implant dentistry, supporting optimal outcomes through a design focused on surgical control, biomechanical integrity, and long-term tissue preservation.

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