Dental Implants enhanced with BLOSSOM® feature an integrated helical self-tapping configuration. This enables the implant to continually cut through the bone with increased efficiency and minimal force. Lower insertion torque with reduced micro motion...

Welcome to the New Cutting-Edge.
Redefining Self-Tapping Technology

- Increased Cutting Efficiency
- Reduced Insertion Torque
- Reduced Micromotion
BACKGROUND
In an effort to eliminate a separate bone tapping procedure during the preparation of an osteotomy site, tapping segments were added onto the body of what are termed "self-tapping" implants. In reality, these were merely implants augmented with a tap portion.

BLOSSOM® DESIGN (PATENT PENDING)
BLOSSOM® is the Patent Pending cutting configuration incorporated into the macro-design of the latest generation of Intra-Lock® Dental Implants.

Unlike traditional tapping design features, BLOSSOM's® architecture is unique in that it incorporates at least one cutting surface on each thread. BLOSSOM's® engineering breakthrough enables the implant to continually slice through the bone with increased efficiency and minimal force.
BLOSSOM®...REDEFINING THE SELF-TAPPING IMPLANT

Two implants, differing only in cutting design, were tested in blocks engineered to simulate type II bone. Both blocks were prepared identically and included observational canals. Each implant was photographed as it was seated at 10 RPM. The illustrations above were derived from the test photographs.

The implant with conventional tapping features cut the bone in discreet segments as it was turned into the osteotomy site (Fig. 1, 2). The bone chips remained compacted only in the flute portion throughout the entire seating.

The implants distinguished by BLOSSOM® were observed to have fewer and smaller chips as well as displaying an even distribution of particulate matter positioned over the entire surface of the implant.

The bone chips originating from the cutting threads were shown to act as nucleating sites for new bone formation in a published study. Blossom implant optical micrographs at 6 weeks in vivo shows bone around the Blossom implant design presenting primary osteonic structures (arrows) in the healing chamber regions, along with bone chips embedded in newly formed bone.*

*To watch BLOSSOM® in action, visit us at www.intra-lock.com and click on the Blossom Cutting Design icon.
COMPARATIVE ANALYSIS OF DESIGN FEATURES:
The data on the right illustrates the amount of insertion torque required as various implants progress into simulated bone. A test was performed on three Intra-Lock implant designs to ensure the only difference would be cutting groove design. Thirty-six implants (Classic DT without cutting flutes, Classic DT with cutting flutes and DT with the BLOSSOM® self-tapping feature) were tested in vitro using simulated Type II bone. The implants were screwed into the test blocks, with the torque being measured on every full turn using a digital torque gauge. The results were statistically significant and are referenced on the charts on the right.

BLOSSOM® significantly reduces insertion torque. The unique design of the threads, cutting surfaces and channels result in improved synchronicity, harmony and contact.

DT WITH BLOSSOM®
BLOSSOM® design, when seated at eight turns, only requires 51Ncm of torque. This represents a 73% decrease over the DT Without Cutting Flutes and a 55% decrease over the DT With Cutting Flutes.

DT WITH CUTTING FLUTES
Conventional cutting flutes, when seated at eight turns requires a force of 113Ncm.

DT WITHOUT CUTTING FLUTES
As the implant is seated at eight turns, this design records a torque force of 187Ncm.

Apical view of the CT Blossom® Implant
BLOSSOM® TECHNOLOGY IS CURRENTLY AVAILABLE ON SELECTED INTRA-LOCK® IMPLANTS.

INTRA-LOCK INTERNATIONAL

Better ideas.™