

Enhanced design cannulated cutting tools
that aid minimal access surgery.



C~Bit[™]
CANNULATED

Analyzing the Needs

Cannulated drill bit technology has been applied in orthopaedic surgery for many decades. The use of this technology allows surgeons to achieve a high degree of accuracy prior to drilling and implant deployment. Accuracy and cutting performance have been the main focus with these types of cutting tools during the design process.

Engineering design and innovation has not seen cannulated surgical drill bits develop with any major design advantages. When designing an instrument for use in orthopaedic surgery careful consideration must be placed on the surrounding tissues and the overall environment of orthopaedic surgery. Current designs do not address some of the additional requirements for soft tissue preservation and therefore potentially causing trauma to the patient. This may have a detrimental effect to the overall surgical outcome.

Symmetrical hole geometry, accuracy, thermal insult, tissue damage, sharpness, sterility, strength and importantly cost, are just some of the issues associated with drilling living human bone tissue.

Cannulated orthopaedic drill bit designs meet a few of these requirements, however, there is now an orthopaedic drill bit which meets all these requirements, including additional features such as a soft tissue friendly flute profile. The cannulated orthopaedic drill bit is fundamental to many orthopaedic procedures, and yet designs fall short of a solution that provides surgeons with the ultimate in design technology.

Symmetrical drilling of a hole is not limited to surgeon control and exact securing of implants is most important if maximum implant life is to be realised.

Specific design instrumentation plays an important role in best surgical outcomes and therefore surgeons, nurses and hospitals are best placed for better outcomes with the right equipment.

When analysing the needs for best practise, emphasis on advancements in implant technology may only be part of the solution, the instruments that deploy them also play an important role. There is now a cannulated drill bit that has been specifically designed for the environment of orthopaedic surgery and tissue preservation, that may aid in overall implant performance.

Introducing C~Bit™ Cannulated – Gentle Precision

C-Bit™ Cannulated is gentle to adjacent soft tissues and does not have the risks that conventional technology may have in damaging these delicate structures. C-Bit™ Cannulated meets the fundamental requirements of surgical drilling procedures and is designed as a surgical device that meets the requirements for soft tissue preservation and improved hole geometry for superior implant thread contact.

C-Bit™ Cannulated is in line with other single use medical technologies; for example the syringe, scalpel and saw blade. Cingular's design considerations provide surgeons, nurses and hospitals with a superior product that is cost effective, has improved clinical and tactical advantages and assists in reducing costs, cross contamination and infection rates. C-Bit™ Cannulated meets all associated issues with drilling human living tissue, first time, every time with no exceptions.

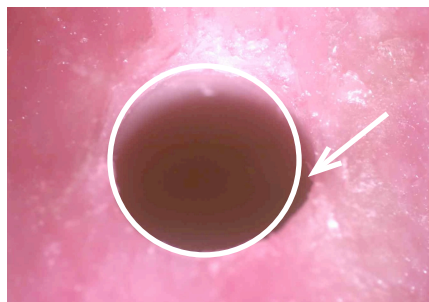


C~Bit™ Cannulated - addressing the additional needs for soft tissue preservation

C~Bit™ CANNULATED – Symmetrical Hole Geometry

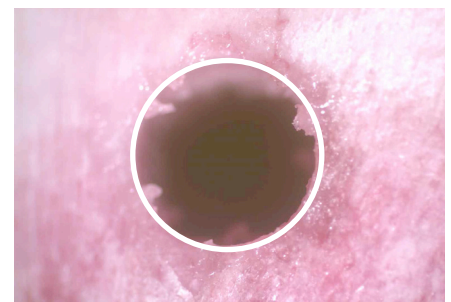
Traditional drill bit designs have the tendency to side cut. Side cutting may lead to compromised hole geometry, decreasing implant thread contact. C~Bit™ Cannulated provides a symmetrical hole geometry maximising implant contact, improving the thread interface for greater screw pull out strength and superior fixation.

Conventional Drill Hole



Compromised Hole Geometry

C~Bit™ CANNULATED Drill Hole



Symmetrical Hole Geometry

The C~Bit™ Approach

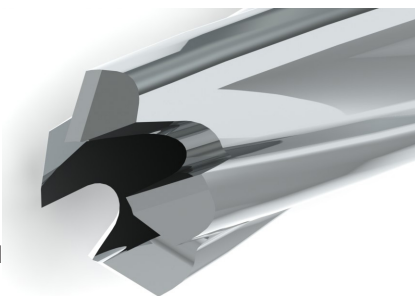
The industrial sector has their own specifically designed cutting tools for the drilling of industrial type materials. In the case of orthopaedic surgery, continuing to utilize cutting tool technology that has largely relied on the industrial sector may not be the best approach. Cingular approached the design process to achieve a cannulated drill bit device specifically designed for use in living human tissue.

Design

C~Bit™ Cannulated has been designed with careful consideration to requirements of orthopaedic surgeons. C~Bit™ Cannulated has enhanced design characteristics that will outperform any other cannulated orthopaedic drill bit on the market today, providing the surgeon with certainty, peace of mind and confidence that the device will be sterile, cut through bone tissue accurately, minimising damage caused to soft tissue whilst maintaining a symmetrical hole geometry.

The design features include - radius leading and trailing flute edge, 4 cutting blades, providing maximum cutting efficiency where needed whilst preserving hole geometry for maximum bone & implant contact. C~Bit™ Cannulated is the work of many years of cutting tool optimisation and has been engineered to provide superior strength, optimal surgical performance for best surgical outcomes.

It is without question, the product of preferred choice is the product that performs the best. C~Bit™ Cannulated is a high performance single-use cannulated surgical instrument. C~Bit™ Cannulated's unique revolutionary design is the most advanced cannulated orthopaedic drill bit on the market.



Packaging and Sterilizing

As resistant strains of bacteria and viruses become wide spread the issue of sterility becomes more of an every day risk. Multiuse orthopaedic cannulated drill bits, once exposed to human tissue, if re-used have a real risk to cross contaminate.

C~Bit™ Cannulated process uses the highest standards for passivation and sterilizing eliminating all potential impurities that may lead to contamination of the device. C~Bit™ Cannulated are sterilized using gamma irradiation, guaranteeing sterility. The packaging is modest but without compromise. Provided inside the packaging are four stickers for traceability and re-ordering. C~Bit™ Cannulated is supplied in boxes of 10, 20, 50 and 100 units.

Why Single-Use - Disposable?

Once contaminated multi-use cannulated drill bits pose difficulties to sterilization departments, as they are difficult to de-contaminate. Sterility of the device, once used, cannot be guaranteed. Multi-use cannulated drill bits have a higher risk for potential cross contamination than other non-cannulated instruments.

Orthopaedic surgical instruments have become increasingly advanced in some areas however in some areas hospitals continue to re-use instruments that pose significant cross contamination risks. Infections as a result of surgery are extremely difficult to treat and are very costly to health care facilities around the globe. The use of gamma irradiation is far superior method of sterilization to that of hospital type autoclaves.

To avoid sterility and cutting performance problems that arise from re-processing, C~Bit™ Cannulated is sold in sterile packaging, gamma sterilized and recommended supplied as a one-time use disposable product.

Cingular Guide Wires

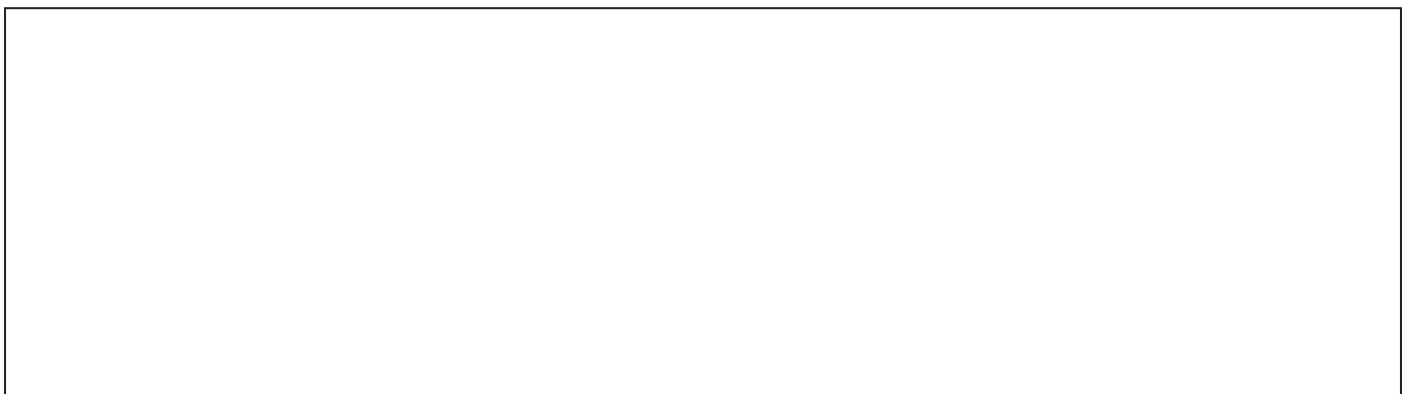
As with all cannulated drill bits the deployment of a guide wire is necessary to guide the device during the drilling process. Cingular's guide wires also utilize C~Bit™ technology. For further information about C~Bit™ technology please visit www.cingular-ortho.com

Cutting tool instruments designed to aid
minimal access surgery.



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