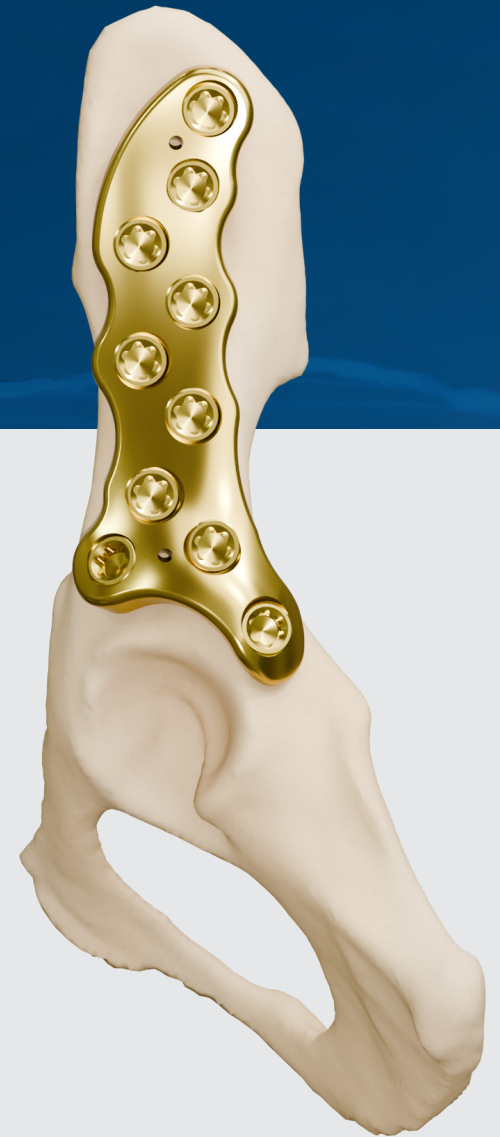


Fusion Implants

Advanced Veterinary Devices



FLIP

Feline Lateral Iliac Plate

APPLICATION NOTES

The Feline Lateral Iliac Plate (FLIP) was designed based on dozens of CT scans of various cat breeds. There are left and right versions in two size variations that will accommodate the vast majority of cats.

Each Fusion FLIP is crafted from medical-grade titanium alloy (Ti6Al4V) in a multi-step manufacturing process starting with 3D printing and including heat treatment, CNC machining, and anodisation.

The Feline Lateral Iliac Plate (FLIP) was designed based on dozens of CT scans of various cat breeds. There are left and right versions in two size variations (Small and Large) that will accommodate the vast majority of cats; both accept 2.4mm or 2.7mm locking screws. K-Wire holes aid you in temporary fixation. In Fusion Implants

2.4/2.7mm systems, screw sizes from 6-10mm we go up in 1mm increments, to make measurements and subsequent placement more precise.

Although the FLIP appears to be a high screw density, it is not expected that you need to engage all of these. This screw density and orientation allows the FLIP to be applied to a wide variety of fracture configurations. Additionally, the screw holes were staggered obliquely, so that you can help accommodate tricky oblique fractures in either direction. Aim to achieve a minimum of 3-4 locking screws in each major fragment of the fracture.

The FLIP features an acetabular component at the caudal aspect of the plate, designed to wrap around the cranial aspect of the acetabulum, making it applicable to very caudal fractures. In less caudal fractures, screw holes allow for a longer working length of the plate on the caudal fragment.



Sacrum engagement or not?

Sacral engagement has been proposed to encourage screw loosening as the screws do not cross the sacroiliac joint in a lag fashion and therefore are exposed to motion of the joint.

Mechanical studies suggested the benefit of engaging the Sacrum is only gained if you can engage >50% of width of the sacrum; if the tip of the screw engages <50% the sacrum there may actually be some mechanical disadvantage because of micro-motion between the Iliac wing and Sacral wing, promoting screw loosening.

A study 'Risk Factors for Screw Migration After Triple Pelvic Osteotomy' (2001), noted that screws in the first, second and third plate holes migrated most often, they stated that by increasing the depth of screw purchase into the sacrum and the percentage of sacrum penetrated significantly decreased the occurrence of migration in the first and second screws. This study found that >50% engagement reduced screw migration.

A 2004 study 'Increased Sacral Screw Purchase Minimizes Screw Loosening in Canine Triple Pelvic Osteotomy' stated that by sufficiently engaging the sacrum with screws cranial to an iliac osteotomy, implant failures can be avoided. Frequency of screw loosening in relation to percentage sacral bone purchase found that engagement >50% reduced the risk of loosening.

Therefore, if you are contemplating sacral engagement during an operation utilising FLIP consider; how much engagement can we achieve, especially in the three most cranial screws? If the answer is <50% then we need to consider if attempting sacral engagement could result in higher risk of screw loosening.

Considering all the above limitations of sacral purchase, we do not recommend this, unless at least three screws engage in the cranial fragment, and the bone quality for these screws appear good.

