

SOPLC Internal Fixation system

Sliding On Pivot Locking Clamps

A **Smartvetimplants**® Sliding On Pivot Locking Clamps system (**SOPLC**) is an improved modular implant system for veterinary use only, what is composed of three main components, pivots, clamps and screws. The pivots can be contoured in any plane. Standard screws fix the pivots to bone via clamps. Together these components form a unique internal construct that brings all advantages of previously existed rod and clamps system but thanks to the special design of clamps it provides a locking system. Because of the special treatments of the pivots and clamps results an increased friction what makes the whole system much more stable.

Indications:

The Sliding On Pivot Locking Clamps (**SOPLC**) system is intended for canine and feline long bone repair.



Features and Benefits:

- Available in three sizes: mini, small, medium
- Locking system is provided via standard cortical screws
- Versatile system requires less inventory
- Pivots are available in several lengths or can be cut to length
- Pivots can be contoured in multiple planes for optimal anatomic fits
- Clamps can be positioned anywhere on the pivot



Implant features

Pivots

- Made of implant-quality medical grade stainless steel
- Three diameters are available:
 1. Mini (2.0 mm \varnothing)
 2. Small (3.0 mm \varnothing)
 3. Medium (5.0 mm \varnothing)
- Offered in many lengths or can be cut to length



Clamps

- Affix to pivot using standard cortical screws
- Thanks to the special design cortical screws provide locking system
- Slide axially to any point along the length of pivot
- Clamps has an asymmetrical design, screws can be placed through only one side



Screws

- Clamps accept standard cortical screws
- Either self-tapping or non-self-tapping can be used
- Use appropriate screws for each clamp size:
 1. Mini: 2.0 mm cortex
 2. Small: 2.7 mm cortex
 3. Medium: 3.5 mm cortex



AO Principles

Anatomic reduction

The **SOPLC** system can be contoured to the bone, provide fracture reduction and restore anatomic alignment.

Stable fixation

The **SOPLC** system provides stable fixation to maintain proper alignment during healing and restore function to the injured limb.

Preservation of blood supply

The **SOPLC** system minimizes surface contact with the bone and disruption of soft tissues, thereby preserving the blood supply.

Early, active mobilization

The **SOPLC** system provides stable fixation which may contribute to pain reduction and permit early active mobilization conducive to optimal recovery.





Surgical Technique

Preparation

Determine which **SOPLC** system is the most appropriate based on patient size, weight, bone, fracture pattern and activity.

Recommendation for suitable **SOPLC** system based on patient weight, injury location can be found on the page of this catalogue.

Ensure adequate soft tissue coverage where the system is to be implanted considering it is a slightly larger than corresponding plate system.



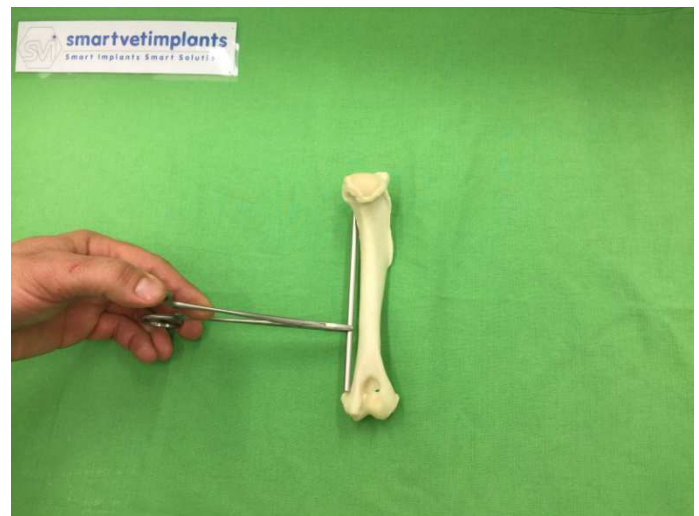
Determine the length of the pivot and number of clamps, anticipating where each screw will be fixed to fragments.

Note: It is strongly suggested that at least three clamps and screws are placed in each main bone fragment, especially in soft bone.

Lag screw placement (optional)

After reduction, one or more lag screws may be inserted for fracture compression before placement of the SOPLC system.

Leave the periosteum intact whenever possible, to preserve the blood supply to the bone fragments.





Pivot preparation

Instruments:

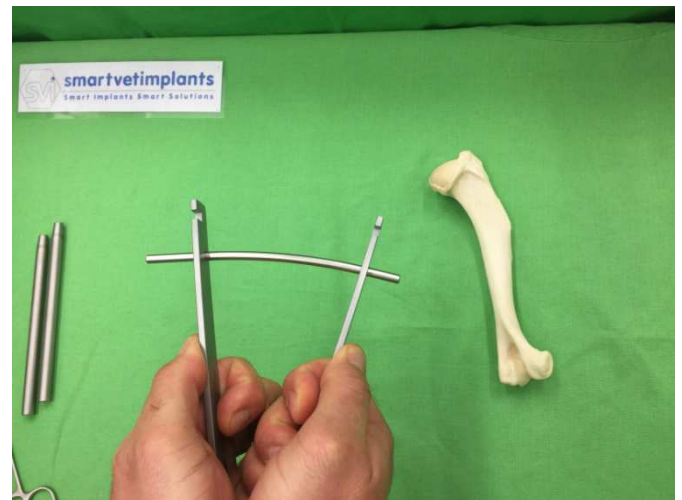
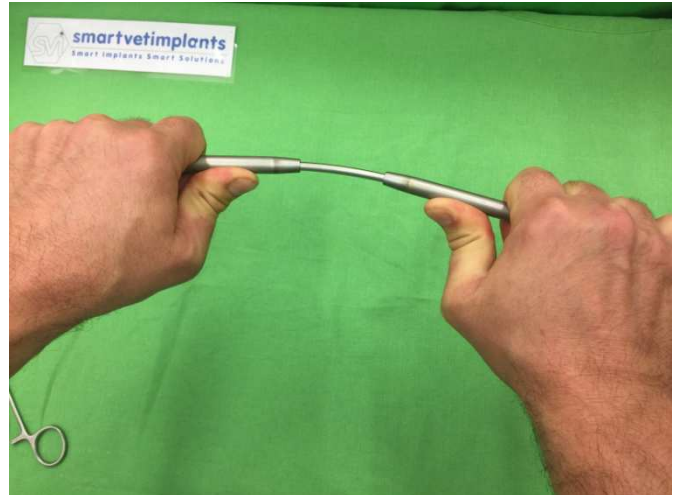
- bending irons (pair)
- flat bending iron
- holding forceps

Firstly consider and chose the right length of pivots available in SOPLC system to avoid the cut to length. If pivot requires cutting, ensure significant burrs are removed from the cut ends prior implantation.

Contour the pivot using appropriate bending irons.

To improve torsional stability, the contour of the pivot should match the shape of the bone as closely as possible.

The pecked line on the pivot is a helpful reference for contouring in multi-planes.



At this time the consideration of number of clamps placed on pivot is very important, later on additional clamps placement could be difficult and time consuming

Before loading clamps consider the direction of clamps on pivot, keeping on mind the clamps has an asymmetrical design which not allow clamps to be rotated to other side.



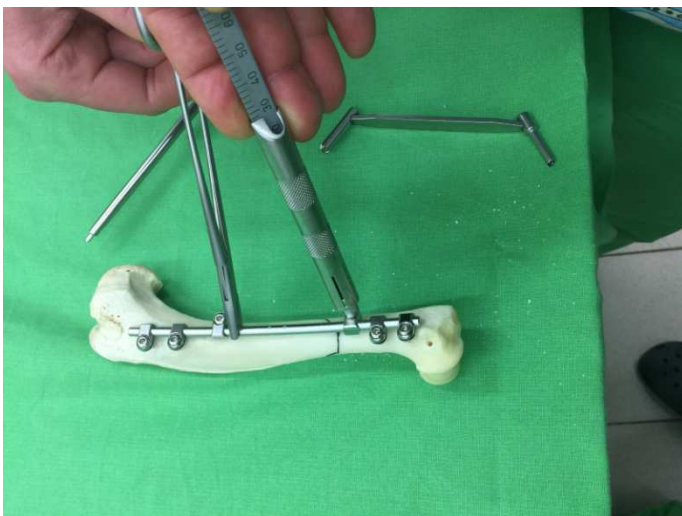
Clamps can be loaded during pivot positioning but it is challenging what is better to avoid.

During clamps loading use standard screws as a temporary fixation on the pivot to avoid sliding off and fix the clamps on the chosen direction.



Using a pivot holding forceps, place the construction in the operative side. Orient each clamps to provide optimal screw purchase in the various bone fragments.

Use the appropriate drill guide to drill the screw hole.



Measuring with the depth gauge, tap (if using non-self-tapping screws) and then insert the appropriate screw.

Tighten the screw then repeat for all remaining screws.

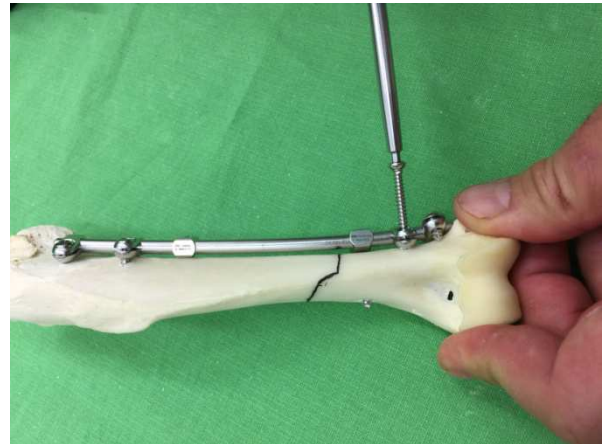




The screws must be fully tightened in order for the clamp to securely grasp the rod.



It is suggested that at least three clamps and screws are placed in each main bone fragment, especially in soft bone





SOPLC® System reference table

Mini

Catalogue No.

18400-02020

Mini clamp

2.0 screw

Pivots

∅ 2 mm

Catalogue No.

Lenght mm

18401-20030

30

18401-20045

45

18401-20060

60

18401-20075

75

18401-20090

90

18401-20110

110

18401-20130

130

Bending Iron for ∅ 2 mm Pivots (2 required)

∅ 2 mm Pivot Holding Forceps

Small

Catalogue No.

18400-02730

Small clamp

2.7 screw

Pivots

Catalogue No.

Lenght mm

∅ 3 mm

18401-30050

50

18401-30070

70

18401-30090

90

18401-30110

110

18401-30130

130

18401-30150

150

Bending Iron for ∅ 3 mm Pivots (2 required)

∅ 3 mm Pivot Holding Forceps



Medium

Catalogue No.

18400-03550 Medium clamp 3.5 screw

Catalogue No.	Pivots Lenght mm	Ø 5 mm
18401-50080	80	
18401-50100	100	
18401-50120	120	
18401-50140	140	
18401-50160	160	
18401-50180	180	
18401-50200	200	
18401-50220	220	

Bending Iron for Ø 5 mm Pivots (2 required)

Flat Bending Iron for Ø 5 mm Pivots

Ø 5 mm Pivot Holding Forceps

