

SWEMAC

Compression Hip Screw System

Swemac
Orthopaedics

SWEMAC

Compression Hip Screw System

This system provides a simple and easy-to-use solution for all surgeons facing hip fractures. Offering a wide choice of hip plates combined with a unique lag screw, and innovative instrumentation. Each implant is individually sterile packaged for immediate use and greater inventory control. All implants are made from stainless steel 316 LVM.

SLIMLINED HIP PLATES

The SWEMAC Hip Plates has a smoothly curved outer profile and still maintains an extra ordinary mechanical strength.

The hip plates are available with plate/barrel angles 130°, 135°, 140°, 145° and 150°. The plate is also available in 95° angle for supracondylar fractures.

The plates are available with 2 to 16 holes.

The most proximal hole in the hip plate will allow the use of a 6.5 mm selftapping cancellous bone screw.

The SWEMAC Hip Plate is compatible with the Hansson Twin Hook.

SWEMAC Dynamic Plate
Patent no: 0101585-8



Keyed

Rotational stability of the lag screw in the plate barrel is ensured through bilateral flattening of the shaft of the lag screw to match the inside of the hip plate barrel.



Compression screw

The compression screw will allow the surgeon to compress the fracture peroperatively.



Selftapping bone screws

Selftapping 4.5 mm cortical bone screws are used to fix the hip plate to the femoral shaft. The operation time is reduced as no tapping is required.



R 20 curvature

The underside of the hip plate has a R 20 curvature following the radius of the femoral shaft. It is also partly due to this curvature that the SWEMAC Hip Plate has been found to be one of the strongest hip plates on the market.



Periosteal elevator

When a small incision is required, the distal part of the hip plate can be used as a periosteal elevator to separate the muscle from the bone.

OPTIMAL FIXATION

An adequate grip in the femoral head is crucial for successful fixation of hip fractures. The SWEMAC Lag Screw has been designed to overcome the reduction in strength in the cancellous bone caused by osteoporosis.



Strength of fixation is dependent upon both implant and bone properties. If too much bone trabeculae is removed, the interaction between bone and implant may be destroyed. To achieve a good fixation, it is vital to save sufficient bone trabeculae in the femoral head. The special design of the triple reamer and the SWEMAC Lag Screw minimize the disruption of the bone trabeculae.

The SWEMAC Lag Screw has four unique features improving the holding power in the femoral head.

First, it has a conical core. This allows an increase of the total area of the thread and thereby improving the holding power in the cancellous bone.

Second, it has gradually decreasing distance between the threads, starting from the tip. This will compress the bone and prevent rotation forward.

Third, the threaded part has the same outer diameter over the whole length, improving the holding power even further.

The SWEMAC Lag Screw is compatible with the Medoff Sliding Plate.

SWEMAC Lag Screw
Patent no: 9404035-9
Patent no: 0100573-5



Blunt Tip

Fourth, the SWEMAC Lag Screw has a blunt tip in order to minimize the risk of femoral head penetration.

PREVENTS MEDIAL DISPLACEMENT

The SWEMAC Lateral Support Plate prevents medial displacement of the shaft relative to the neck and head fragment. A rotationally unstable neck and head fragment can be additionally stabilized with a 6.5 mm selftapping cancellous bone screw inserted parallel to the lag screw.



SWEMAC Lateral Support Plate
Patent pending



Anatomic curvature

The under side of the lateral support plate has an anatomical curvature templating the greater trochanter.



Fixation

The holes in the lateral support plate will accept either 4.5 mm cortical bone screws or 6.5 mm cancellous bone screws.



Adjustable

The lateral support plate allows the surgeon to adjust the position of the support plate, depending on the distance between the plate barrel and the greater trochanter. This distance will vary depending on the plate angle.

Dynamic

The lateral support plate will allow dynamic axial compression to occur between the fractured lateral cortex (above the plate barrel) and the femoral shaft.

Low profile

The lateral support plate has been designed to minimize soft tissue irritation.

Minimally innovative

There is no need to extend the incision further when using the lateral support plate. The distal part of the hip plate can be used as a periosteal elevator in order to separate the muscle from the bone, creating a pocket proximal to the entrance hole of the plate barrel. The lateral support plate can then be inserted prior to the insertion of the hip plate and thereafter connected.

INNOVATIVE INSTRUMENTATION

The SWEMAC Angle Guide

A correct placement of the guide pin is the most important step in the whole operative procedure. The appropriate angle guide is placed on the femoral shaft. A 3.2 mm guide pin is inserted in the central hole of the angle guide and advanced into the femoral head under image intensification. If the first guide pin is placed in a wrong position, the angle guide will allow an additional guide pin to be inserted using the first guide pin as a reference. There is therefore no need to change the position of the angle guide on the lateral cortex.



Frontal view



A guide pin is introduced too superior to the central axis line of the femoral neck and head.

A second guide pin is introduced in an optimal position 5 mm inferior to the first guide pin. The first guide pin is then removed.

Lateral view

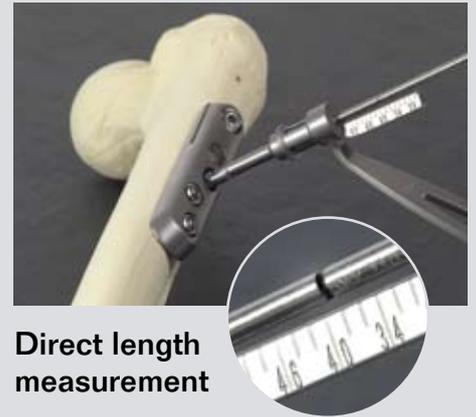


A guide pin is introduced too posterior to the central axis line of the femoral neck and head.

A second guide pin is introduced in an optimal position 5 mm anterior to the first guide pin. The first guide pin is then removed.

For more information, see Operative Technique.

The most distal hole in the SWEMAC Angle Guide is used for the Medoff Sliding Plate.



Direct length measurement

The required length of the 4.5 mm cortical bone screw can be read on the scale of the drill sleeve against the black mark on the 3.2 mm drill.



Safe reading

Less risk of miss reading the adjusted length on the triple reamer.



Rigid 3.2 mm guide pin

The rigid 3.2 mm guide pin ensures a quick, precise and safe lag screw placement. The threaded tip guarantees a secure seating in the subcondral bone.



Stainless steel instrument tray

The instrument tray is made completely out of stainless steel wire, ensuring good penetration during steam autoclaving.

Swemac Orthopaedics AB develops and promotes unique orthopaedic implants and instruments for fracture treatment and small joint replacement. Swemac's products are promoted worldwide by distributors.

Swemac
O r t h o p a e d i c s

Swemac Orthopaedics AB
Industrigatan 11 • SE-582 77 Linköping • Sweden

Phone +46 (0) 13 37 40 30 • Fax +46 (0) 13 14 00 26
E-mail info@swemac.com