



## SURGICAL TECHNIQUE




### DYNAMIC HIP & DYNAMIC CONDYLAR SCREW SYSTEM (DHS/DCS SYSTEM)

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## SYSTEM OVERVIEW

PLATES	
<p><b>95°DCS PLATE WITH DCP HOLE</b></p> <ul style="list-style-type: none"><li>• <b>Catalogue number-</b> Stainless Steel 316L: SS 154, Titanium Gr. 5: TT 154</li><li>• Available in Stainless Steel 316L and Titanium Grade 5.</li><li>• Barrel angle- 95°</li><li>• 3 TO 16 holes.</li><li>• Thickness: 5.4 mm, width: 16.0 mm</li><li>• Fixation with Ø 4.5 mm Cortex Screw.</li></ul>	
<p><b>95°DCS PLATE WITH ROUND HOLE</b></p> <ul style="list-style-type: none"><li>• <b>Catalogue number-</b> Stainless Steel 316L: <b>SS 153</b>, Titanium Gr. 5: <b>TT 153</b></li><li>• Available in Stainless Steel 316L and Titanium Grade 5.</li><li>• Barrel angle- 95°</li><li>• 3 TO 16 holes.</li><li>• Thickness: 5.4 mm, width: 16.0 mm</li><li>• Fixation with Ø 4.5 mm Cortex Screw, DHS lag screw, DHS compression screw</li></ul>	
<p><b>DCS BARREL LOCKING PLATE 95°</b></p> <ul style="list-style-type: none"><li>• <b>Catalogue number-</b> Stainless Steel 316L: <b>SS 326</b>, Titanium Gr. 5: <b>TT 326</b></li><li>• Available in Stainless Steel 316L and Titanium Grade 5.</li><li>• Barrel angle- 95°</li><li>• 3 TO 16 holes</li><li>• Thickness: 5.4 mm, width: 16.0 mm</li><li>• Fixation with Ø 4.5 mm Cortex Screw, Locking Screw Ø5.0 mm, DHS lag screw, DHS compression screw</li></ul>	



**DHS BARREL PLATE ROUND HOLE 120° , 125°, 130°, 135°, 140°, 145° (BARREL LENGTH 25MM & 38MM)**

- **Catalogue number-**  
Stainless Steel 316L: **SS 151**,  
Titanium Gr. 5: **TT 151**
- Available in Stainless Steel 316L and Titanium Grade 5.
- Barrel angle- 120°, 125°, 130°, 135°, 140°, 145°
- 3 TO 16 holes
- Thickness: 5.8 mm, width: 19.0 mm
- Fixation with Ø 4.5 mm Cortical Screw, DHS lag screw



**DHS BARREL PLATE DCP HOLE 120° , 125°, 130°, 135°, 140°, 145° (BARREL LENGTH 25MM & 38MM)**

- **Catalogue number-**  
Stainless Steel 316L: **SS 152**,  
Titanium Gr. 5: **TT 152**
- Available in Stainless Steel 316L and Titanium Grade 5.
- Barrel angle- 120°, 125°, 130°, 135°, 140°, 145°
- 3 TO 16 holes
- Thickness: 5.8 mm, width: 19.0 mm
- Fixation with Ø 4.5 mm Cortical Screw, DHS lag screw



**DHS BARREL LOCKING 120° , 125°, 130°, 135°, 140°, 145°**






- **Catalogue number-**  
Stainless Steel 316L: **SS 325**,  
Titanium Gr. 5: **TT 325**
- Available in Stainless Steel 316L and Titanium Grade 5.
- Barrel angle- 120°, 125°, 130°, 135°, 140°, 145°
- 3 TO 16 holes
- Thickness: 5.8 mm, width: 19.0 mm
- Fixation with Ø 5.0 mm Locking Screw, Ø 4.5 mm Cortical Screw, DHS lag screw



**FIXATION ELEMENTS**

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<p><b>DHS LAG SCREW</b></p> <ul style="list-style-type: none"> <li>• <b>Catalogue number-</b> Stainless Steel 316L: <b>SS 155</b>, Titanium Gr. 5: <b>TT 155</b></li> <li>• Available in Stainless Steel 316L and Titanium Grade 5.</li> <li>• Length: 50 mm to 120 mm with 5 mm variation</li> </ul>	
<p><b>DHS COMPRESSION SCREW</b></p> <ul style="list-style-type: none"> <li>• <b>Catalogue number-</b> Stainless Steel 316L: <b>SS 156</b>, Titanium Gr. 5: <b>TT 156</b></li> <li>• Available in Stainless Steel 316L and Titanium Grade 5.</li> <li>• Length: 36 mm</li> </ul>	
<p><b>5.0 MM LOCKING SCREW</b></p> <ul style="list-style-type: none"> <li>• <b>Catalogue number-</b> Stainless Steel 316L: <b>SS 305</b>, Titanium Gr. 5: <b>TT 305</b></li> <li>• Available in Stainless Steel 316L and Titanium Grade 5.</li> <li>• Length: 16 mm to 90 mm</li> </ul>	
<p><b>4.5 MM CORTEX SCREW</b></p> <ul style="list-style-type: none"> <li>• <b>Catalogue number-</b> Stainless Steel 316L: <b>SS 109</b>, Titanium Gr. 5: <b>TT 109</b></li> <li>• Available in Stainless Steel 316L and Titanium Grade 5.</li> <li>• Length: 10 mm to 80 mm</li> </ul>	
<p><b>GUIDE WIRE</b></p> <ul style="list-style-type: none"> <li>• <b>Catalogue number-</b> Stainless Steel 316L: <b>SS 291</b> Available in Stainless Steel 316L</li> </ul>	
<b>INSTRUMENT SET</b>	
<p><b>SIS 104 DHS &amp; DCS Instruments Set</b></p> <p>SIS 104-001 Q.C.Triple Action Remer for D.H.S. 38mm SIS 104-002 Q.C.Triple Action Remer for D.C.S. 25mm</p>	



SIS 104-003	Q.C.Tap for D.H.S/D.C.S. Screw 12.5mm
SIS 104-004	D.H.S. Wrench With Coupling Screw (Pcs.2) Set
SIS 104-005	Nylon Face Inspector
SIS 104-006	Q.C. Fix Angle Guide 135°
SIS 104-007	Q.C. Fix Angle Guide 130°
SIS 104-008	Angle Guide Adjustable 95-145
SIS 104-009	Tube Guide with Sloted Sleeve (PCS.2) Set
SIS 104-010	Direct Measuring Device
SIS 104-011	Centric Sleeve for Box Spanner
SIS 104-012	Centric Sleeve for Box Tap
SIS 104-013	Threaded Guide Wire 2.5mmX9”
SIS 104-014	Q.C.T-Handle
SIS 104-015	Q.C. Fix Angle Guide 95'
SIS 104-016	Box with Silicon Base



## INTENDED USE

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### **Dynamic Hip Screw (DHS):**

The Dynamic Hip Screw and Plate are designed to give strong and stable internal fixation of variety of intertrochanteric, Sub trochanteric and Basilar neck fracture with minimal soft tissue irritations.

### **Dynamic Condylar Screw (DCS):**

The Dynamic Condylar Screw and plate are designed to provide strong and stable internal fixation of certain distal femoral and subtrochanteric fractures, with minimal soft tissue irritation.

## OTHER INFORMATION

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The DHS plates and DCS plates are made of two materials –

1. Stainless Steel (Grade SS 316L)
2. Titanium (Grade 5)

### **DHS:**

The DC hole allow angulation of Cortex screw 4.5mm and for lag screw fixation of medial fragments.

It allows axial compression and multiple – screw fixation of the main fragment in subtrochanteric fractures with shaft extension.

The DHS Plate Barrel correspond to such design of the DHS Lag screw, preventing rotation of the lag screw within the barrel. It also eases insertion of the plate over the DHS lag screw.

### **DCS:**

DCP holes in the DCS side plate allow angulation of 4.5 mm cortex screw and axial compression across a shaft fracture.

The DCS Plate Barrel correspond to such design of the DHS Lag screw, preventing rotation of the lag screw within the barrel. It also eases insertion of the plate over the DHS lag screw.

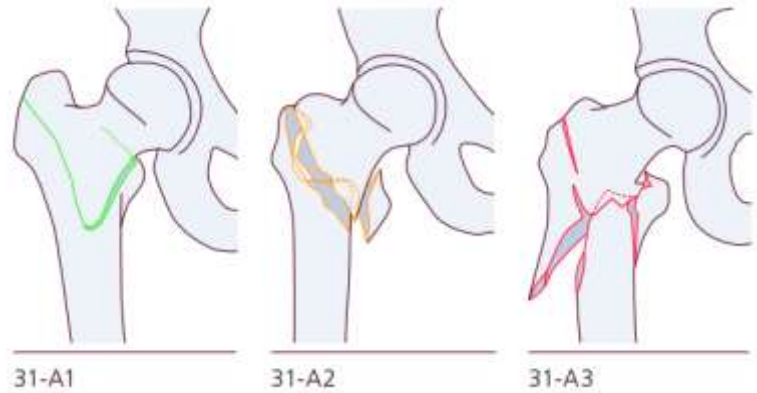
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## INDICATIONS AND CONTRAINDICATIONS

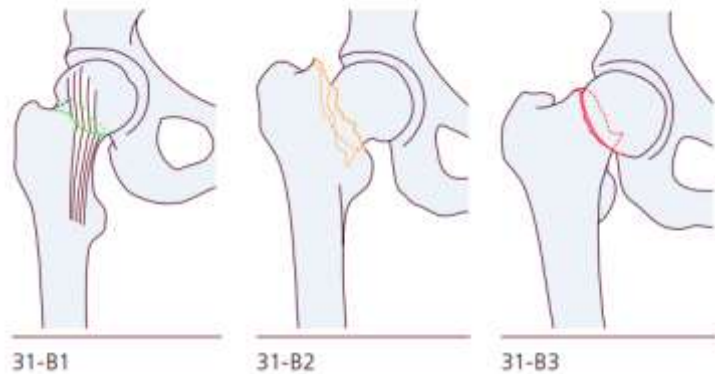
### DHS

- Pertrochanteric fractures of type 31-A1 and 31-A2
- Intertrochanteric fractures of type 31-A3
- Basilar neck fractures 31-B (DHS Screw in conjunction with an antirotation screw)
- Subtrochanteric fractures



**Contraindications:** The DHS is not to be used in cases where there is a high incidence of:

- Sepsis
- Malignant primary or metastatic tumors
- Hypersensitivity to metal or allergic reaction
- Compromised vascularity
- Inadequate bone quantity and/or bone quality
- Early or Late Infection, both deep and / or superficial

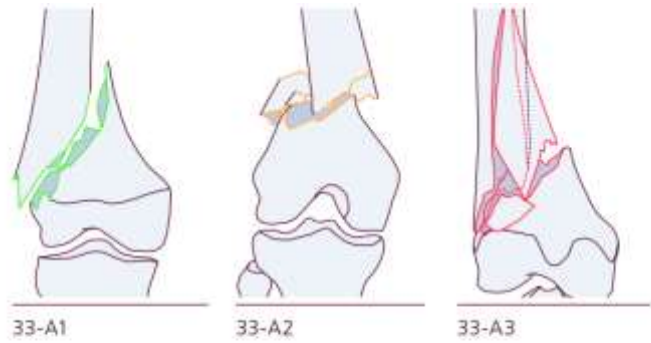


### DCS

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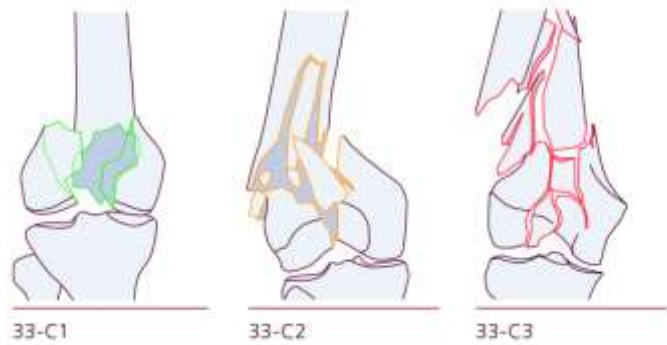


- Proximal femur: Very proximally located, purely subtrochanteric fractures of types 32-A and 32-B
- Distal femur: Fractures of type 33-A (extra-articular, supracondylar) and fractures of type 33-C (fully articular fractures)



### Contraindications

- Pertrochanteric fractures or trochanteric fractures with subtrochanteric expansion (31-A3)







## **ADVERSE REACTIONS**

Adverse reactions may include but are not limited to:

- Clinical failure (i.e. pain or injury) due to bending, loosening, breakage of implant, loose fixation, dislocation and/or migration
- Pain, discomfort, and/or abnormal sensations due to the presence of the implant.
- Primary and/or secondary infections.
- Allergic reactions to implant material.
- Necrosis of bone or decrease of bone density.
- Injury to vessels, nerves and organs.
- Elevated fibrotic tissue reaction around the surgical area.

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## DHS IMPLANTATION

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### 1. PLATE SELECTION

The standard 38mm barrel length is most commonly indicated.

The 25mm short barrel is indicated for specific clinical situations, including:

- Cases in which the standard barrel may not provide sufficient glide for the lag screw; i.e., a long impaction distance is expected.
- A medial displacement osteotomy
- Unusually small femurs

#### **Barrel Angle**

An evaluation of the angle subtended between the femoral neck and shaft axes (CCD, or collum-center-diaphysis, angle) of the uninjured femur will aid in the selection of the appropriate barrel angle. The 135° barrel angle is most commonly indicated.

**Note:** Greater barrel angles may produce biomechanical advantages in unstable cases; i.e., better gliding characteristics and reduced bending stresses on the plate/barrel junction, although correct placement of the implant becomes technically more difficult as barrel angles increase.

### 2. PREOPERATIVE PLANNING

The size and angle of the plate as well as the length of the DHS Blade or Screw can be determined preoperatively by using the DHS Goniometer.

**Note:** If the DHS blade is from 65mm to 75mm, a DHS plate with short barrel should be used to allow for sufficient dynamization.

### 3. POSITION PATIENT

Place the patient in a supine position on the operating table.

### 4. REDUCE FRACRURE

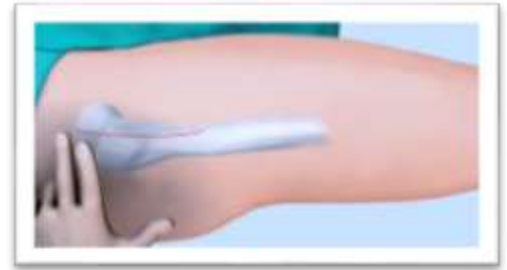
If possible, reduce the fracture under the image intensifier by means of traction, abduction and internal rotation.

### 5. ACCESS

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Make a straight lateral skin incision of approximately 15 cm in length, starting two finger-widths proximal to the tip of the greater trochanter. Split the iliotibial tract lengthwise. Detach the m. vastus lateralis dorsally to the intramuscular membrane, retract ventrally and, if necessary, make a slight notch in the muscle in the region of the innominate tubercle. Expose the proximal femoral shaft without retracting the periosteum.



## 6. INSERT ANTEVERSION WIRE

Determine the femoral neck anteversion by inserting a new Kirschner wire anterior to the femoral neck.

In the case of unstable fractures, insert several Kirschner wires into the femoral head to temporarily stabilize the reduced fragments.

**Instruments:** Kirschner Wire Ø 2.0 mm with trocar tip, length 150 mm



## 7. INSERT GUIDE WIRE

Insert a new DHS/DCS guide wire at the desired angle with the correct angled guide.

The guide wire should be placed in the middle of the femoral head and should extend into the subchondral bone. Check the position of the guide wire in both AP and mediolateral positions.

**Instruments:**

DHS Angled Guide 120°, 125°, 130°, 135°, 140°, 145°  
Guide Wire



## 8. DETERMINE LENGTH OF DHS SCREW/DHS BLADE

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Read the length of the DHS Screw or Blade directly off the guide wire with the measuring device.

If the guide wire is inserted into the subchondral bone remove 10 mm from the measurement.

**Example:** If you read 110 mm on the direct measuring device, the measured length of the implant is 100 mm.

**Instrument:** DHS/DCS Direct Measuring Device



### 9. Ream for insertion of DHS Screw/DHS Blade

Assemble the triple reamer. Slide the reamer over the drill bit until it clicks into place. Set the triple reamer at the length of the implant selected (100 mm in the example). Secure the reamer by tightening the knurled nut.

Ream down to the stop. When reaming in dense bone, use of continuous irrigation is recommended to prevent thermal necrosis.

Control guide wire migration during reaming. Remove triple reamer. Check reaming depth under fluoroscopy during reaming.

#### **Precaution:**

It is recommended that the femoral head is temporarily fixated to prevent any inadvertent rotation.

#### **Instruments:**

DHS Triple Reamer  
Drill Bit  
DHS Reamer  
Nut, Knurled



### 10. REINSERTION OF THE GUIDE WIRE

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If the guide wire is removed accidentally it should be reinserted.

To reinsert the wire push the centering sleeve into the reamed hole and slide an inverted DHS Screw or DHS Blade into the sleeve.

The guide wire can now be replaced in its original position.



## 11. TAP FOR DHS SCREW

Mount the centering sleeve from the side onto the tap and lock it into place by turning the inner sleeve clockwise against the outer sleeve. Tap to the measured length. Check insertion depth.

**Warning:** Tap only dense, hard femoral bone. Do not tap osteoporotic bone.

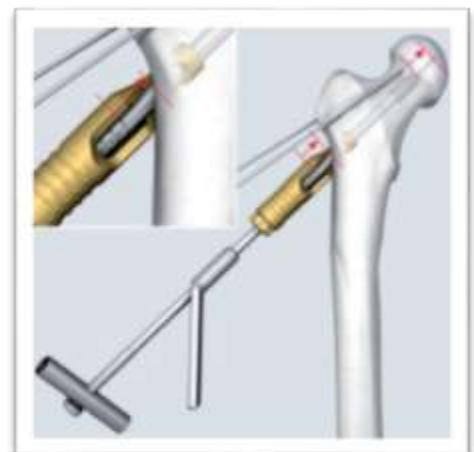


## 12. SCREW IN DHS SCREW

Insert the connecting screw into the wrench, slide an appropriate DHS plate onto it and connect the DHS Screw to the wrench. For DHS screws shorter than or equal to 75 mm, take a DHS plate with short barrel. Mount the centering sleeve onto the wrench.

**Warning:** To avoid damaging the instruments and the implant, tighten the connecting screw securely.

Slide the assembled instrument over the guide wire and push the centering sleeve into the pre-drilled hole. Insert the screw to the desired depth.



**Turn the handle of the wrench until it lies in the same plane as the femoral shaft.**

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Only in this position can the plate be slid over the laterally flattened shank of the DHS Screw.

Check insertion depth.

**Instruments:**

Connecting Screw  
DHS/DCS Wrench for One-Step Insertion Technique (for conventional DHS Screws)  
OR  
DHS/DCS Wrench for One-Step Insertion with octagonal coupling  
DHS/DCS Centering Sleeve



**13. IMPACT DHS PLATE ONTO THE BONE**

The plate can be impacted onto the bone with one of the two impactors.

**Instruments:**

DHS/DCS Impactor



**14. FIX THE DHS PLATE ONTO THE SHAFT**

Remove all the insertion instruments and the guide wire.

Discard the guide wire. Then fix the plate to the femoral shaft.

**A Cortex screws for the DHS Plate**

Use the drill guide and the drill bit to drill holes in a neutral position through the plate holes.

Insert self-tapping 4.5 mm cortex screws of appropriate length.

**Instruments:**



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Universal Drill Guide 4.5/3.2  
Drill Bit Ø 3.2 mm  
Depth Gauge  
Screwdriver Shaft, hexagonal

## 15. Option for DHS Lag Screw

Fragment Compression may also be achieved using DHS Lag screws.

**Warning:** It is not recommended that DHS Lag Screw should be applied in osteoporotic bone.

**Instruments:**

Screwdriver shaft, Hexagonal



## DCS IMPLANTATION

### 1. PLATE SELECTION:

A wide range of plates are available holes from 3 holes to 16 holes as shown in product catalogue of Trauma Implants Page No. 37

The plates are available with Dynamic Compression (DC) and Round holes.

The size of the plate as well as the length of the DCS Screw can be determined preoperatively

### 2. PATIENT POSITION

Supine position: push the patient to the edge of the X-ray-permeable operating table with both legs on extension rails.

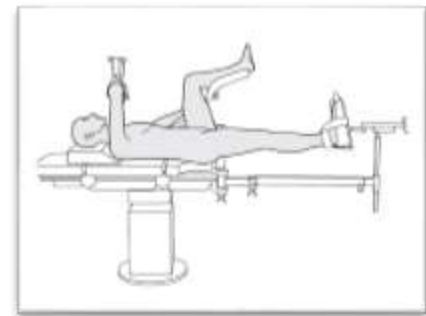
Ensure that no excessive pressure or traction is exerted on any part of the body.

The fracture is reduced by traction, abduction and internal rotation prior to disinfecting the patient.

As intraoperative X-rays through the hip are required in both the A.P. and lateral planes, the surgeon must ensure before the operation that both views are possible and that the pictures are of acceptable quality.



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### 3. REDUCE FRACTURE

Reduce the fracture. The fracture can be temporarily stabilized with 2.5 mm guide wires.

Place these wires so they do not interfere with subsequent positioning of the DCS implant assembly.

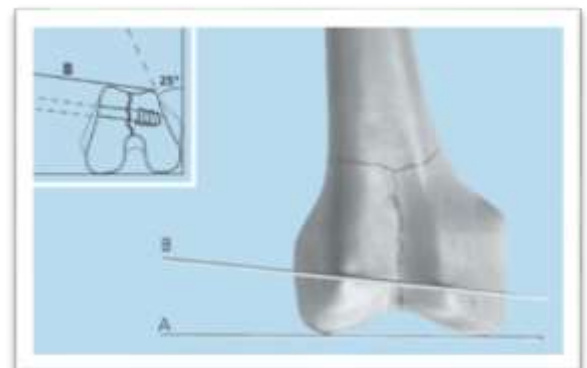
In intercondylar fractures, the wires should be replaced with independent 6.5 mm or 7.3 mm cannulated screws or 6.5 mm cancellous bone screws with washers.



### 4. Determine direction of central guide wire

**Item:** 2.0 mm Kirschner Wire

To determine the direction of the central guide wire, flex the knee to 90°, and mark the axis of the knee joint by placing a K-wire distally over the condyles (A). Place a second K-wire anteriorly over the condyles (B).



**Note:** Placement of the guide wire determines placement of the DCS implant assembly. Misplacement of the guide wire can result in varus/valgus or rotational mal-alignment of the fracture fragments.

### 5. INSERT CENTRAL GUIDE WIRE

Using the DCS drill guide, insert the central guide wire (C) parallel to the distal K-wire (A) in the AP view, and parallel to the anterior K-wire (B) in the axial view. Do not insert the guide wire too far medially; consider the inclination of the medial wall of the distal femur. In the sagittal plane, the

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central guide wire enters the distal femur at a point anterior to the midline between the condyles, and in line with the shaft axis, approximately 2 cm from the knee joint.

Confirm placement of the central guide wire under image intensification. If it is not parallel to the knee joint axis, insert a new 2.5 mm guide wire.

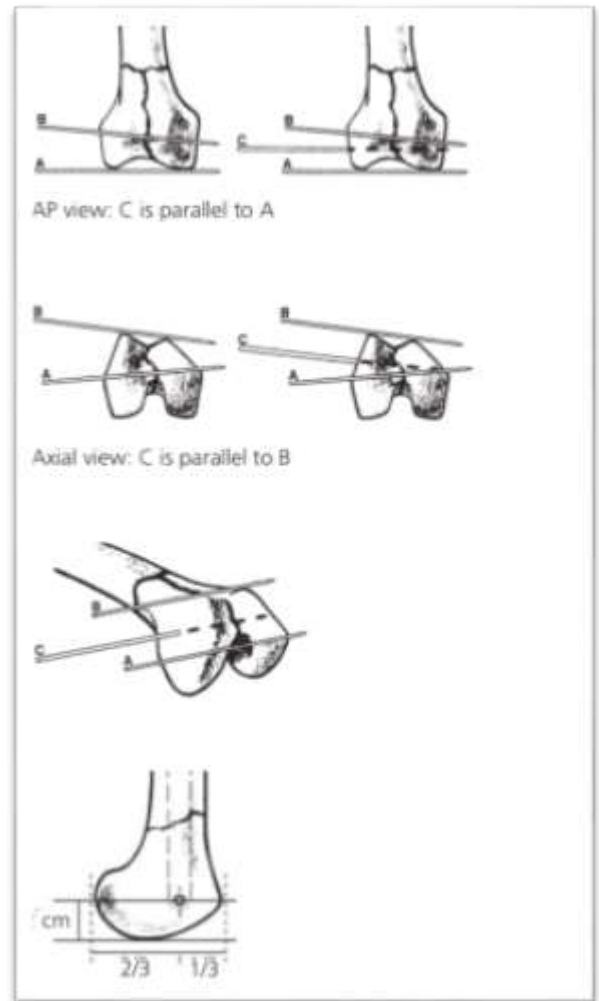
**Note:**

Because it is designed for use with the DHS/DCS instruments and implants, the 2.5 mm guide wire, and not an alternative wire, must be used.

This guide wire remains in place throughout the procedure. If it is inadvertently withdrawn, reinsert it immediately.

**Instruments**

- DCS Drill Guide
- 2.5 mm Guide Wire

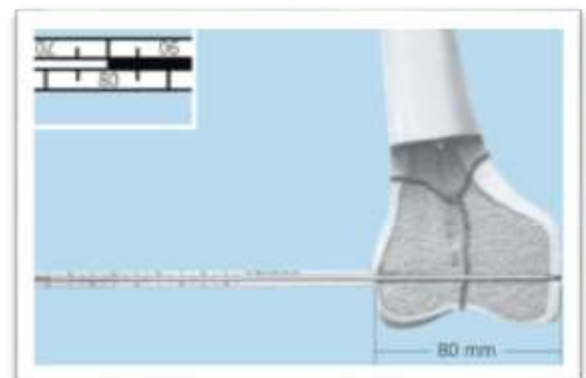


**6. DETERMINE GUIDE WIRE INSERTION DEPTH**

Slide the direct measuring device over the guide wire to determine guide wire insertion depth. Calibration on the measuring device provides a direct reading.

**Instrument**

Direct Measuring Device



**7. CALCULATE REAMING DEPTH AND LAG SCREW LENGTH**

To calculate reaming depth, tapping depth and lag screw length, subtract 10 mm from the reading.

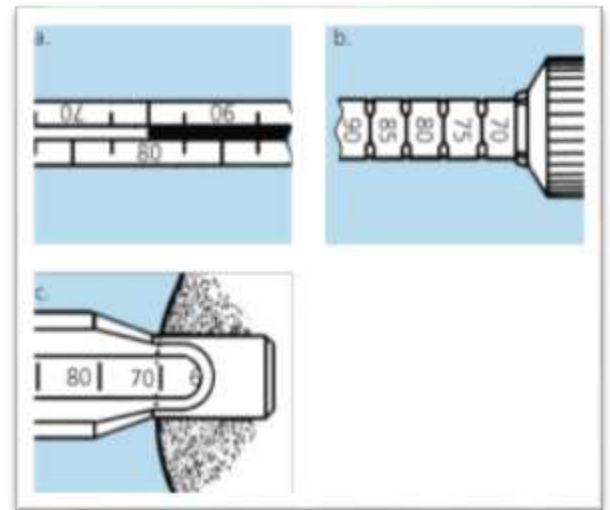
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**For example:**

- a. Direct Reading – 80 mm
- b. Reamer Setting – 70 mm
- c. Tapping Depth (optional) – 70 mm  
Lag Screw Length – 70 mm

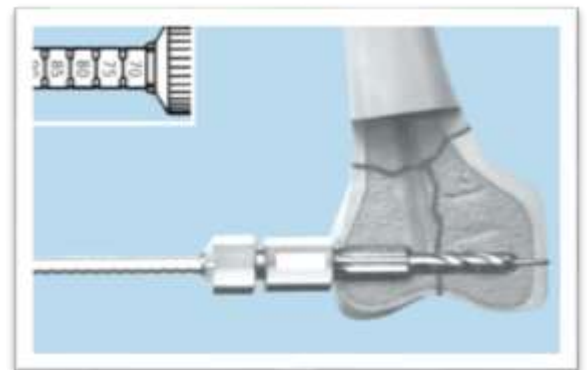
If the compression screw will be used, allow for additional compression of the fracture by selecting a lag screw 5 mm shorter (in this case, 65 mm) and inserting it an additional 5 mm.



**8. REAM TO PRE-DETERMINED DEPTH**

Assemble the DCS triple reamer. Set the reamer to the correct depth. Insert the DCS triple reamer into the small battery drive using the large quick coupling attachment.

Slide the reamer over the guide wire to simultaneously drill for the lag screw, ream for the plate barrel, and countersink for the plate/barrel junction to the preset depth.



When reaming in dense bone, continuously irrigate the DCS triple reamer to prevent thermal necrosis.

**Instruments:**

DCS Triple Reamer

**9. TAP TO PREDETERMINED DEPTH (OPTIONAL)**

If necessary, tap to the predetermined depth using the tap assembly.

Tapping depth can be seen through the window in the **Centering Sleeve**.



**Instruments:**

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Q.C. T Handle

Q.C.Tap For D.H.S/D.C.S. Screw 12.5mm

Tube Guide with Sloted Sleeve Set

## 10. ASSEMBLE LAG SCREW INSERTION ASSEMBLY

Select the correct length DHS/DCS lag screw and assemble the lag screw insertion assembly (see “Assembling the Instrumentation,” page 39). Slide the assembly over the guide wire and into the reamed hole. Seat the long centering sleeve in the hole to center and stabilize the assembly.

**Note:** Keep continuous forward pressure on the DHS/DCS wrench while advancing the lag screw.

### Instruments:

D.H.S. Wrench With Coupling Screw (PCS.2) Set  
Centering Sleeve

Q.C. Fix Angle Guide 95'



## 11. INSERT LAG SCREW

Insert the lag screw by turning the handle clockwise, until the zero mark on the assembly aligns with the lateral cortex.

The threaded tip of the lag screw now lies 10 mm from the joint surface.

The lag screw may be inserted an additional 5 mm in porotic bone, for increased holding power and additional controlled collapse.

**Note:** If a lag screw 5 mm shorter than reaming and tapping depth is used (in this case, 65 mm), insert it an additional 5 mm, until the 5 mark on the assembly aligns with the lateral cortex.



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## 12. ALIGN HANDLE

Before removing the assembly, align the handle so it is parallel with the femoral shaft axis when viewed laterally.

This allows proper placement of the DCS plate onto the lag screw.



## 13. REMOVE WRENCH

Remove the DHS/DCS wrench and long centering sleeve.

Slide the appropriate DCS plate onto the guide shaft/lag screw assembly.

Loosen and remove the coupling screw and guide shaft.

Withdraw the guide wire.



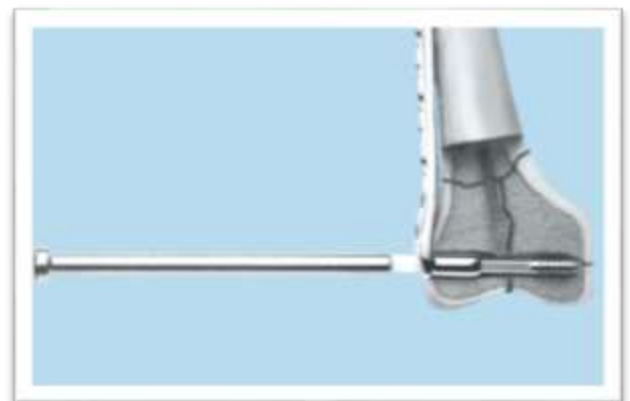
## 14. SEAT PLATE

Gently seat the plate with the NYLON FACE IMPACTOR.

The lateral condylar cortex may be chiseled to further seat the plate on bone.

### Instrument:

Nylon Face Impactor



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## 15. COMPRESS DISTAL FRAGMENTS WITH COMPRESSION SCREW

If the joint fragments were not previously reduced with independent 6.5 mm cancellous bone screws, the DHS/DCS compression screw may be inserted into the lag screw.

In porotic bone, insert the screw very carefully to avoid stripping the lag screw thread.

### Instrument

Large Hexagonal Screwdriver



## 16. FIX PLATE TO FEMUR

### 16A. cortex Screw for DCS plate

Using AO standard screw insertion technique, fix the DCS plate to the femur with 4.5 mm cortex screws.

### 16B. locking screw for locking DCS plate

Carefully screw the LCP drill sleeve into the desired LCP hole until it is gripped completely by the thread.

Drill the screw hole using the drill bit.

Read the screw length directly from the laser mark on the drill bit.

Insert the 5.0 mm locking screws.



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## DHS/DCS REMOVAL

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Remove the plate.

Assemble the insertion wrench, using the long coupling screw. The long coupling screw allows the surgeon to exert traction while unscrewing the lag screw.

Align the flats inside the wrench with the flats of the lag screw. Slide the wrench over the lag screw until it is well over the end of the screw.

Pull on the wrench while turning it counterclockwise.

**Note:** Never use insertion instruments for implant removal

### **Instrument:**

D.H.S. Wrench With Coupling Screw (PCS.2) Set



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## CAUTION

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### Used Implants:

Used implants which appear un-damaged may have internal and/or external defects. It is possible that individual stress analysis of each part fails to reveal the accumulated stress on the metals as a result of use within the body. This may lead ultimately to implant failure after certain point of time due to metal fatigue. **Therefore, reuse of implants is strictly not recommended.**

### Disposal of Used Implants:

Every used or removed implant must be discarded after use and must never be re-used. It should be bent or scratched & then disposed of properly so that it becomes unfit for reuse. While disposing it off, it should be ensured that the discarded implant does not pose any threat to children, stray animals and environment. Dispose of the implants as per applicable medical practices and local, state and country specific regulatory requirement of Bio Medical Waste rules.

### Packaging Materials Disposal:

The packaging material of this device is made of LDPE and therefore if swallowed, may cause choking Hazards. Therefore, it should be disposed of in such a way that keep out of reach of children and stray animals.

### Single Brand Usage:

Implant components from one manufacture should not be used with those of another. Implants from each manufacture may have metal, dimensions and design differences so that the use in conjunction with different brands of devices may lead to inadequate fixation or adverse performances of the devices. Implants manufactured by Samay Surgical shall be used with implants manufactured by Samay Surgical only. Also, Implants shall be used with the same materials of implants, i.e., implants made of SS 316L shall be used with implants made of SS 316L and implants made of Titanium Grade 5 shall be used with implants made of Titanium Grade 5.

## MRI SAFETY INFORMATION

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- Samay Surgical implants are manufactured from Titanium Gr.5, SS316L materials are non-magnetic material, and hence it does not pose any safety risk.
- Patients should be directed to seek a medical opinion before entering potentially adverse environments that could affect the performance of the implants, such as electromagnetic or magnetic field or including a magnetic resonance environment.
- Doctor shall conduct a Risk Benefit Analysis before directing the patient to enter electromagnetic or magnetic fields or including a magnetic resonance environment.
- The Samay Surgical implants has not been evaluated for safety and compatibility in the MR environment but on the basis of literature study below mentioned points can be taken care during MRI
  - The minimum recommended time after the implantation that allows patients to safely undergo MRI examination or allowing the patient or an individual to enter the MRI environment is 6 (six) weeks.

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- The maximum recommended time limit for MRI examination in patients implanted with the evaluated device is 30 min with a scanner operating at 1.5T (Tesla) or less.
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**PRODUCT DETAILS:**



**DHS Barrel Plate Round Hole (Barrel Length 38mm)**

Also Available 125°,130°,140°,  
 Code For S.S. 316L 125°/SS 151-103, 130°/SS 151-203, 140°/SS 151-403  
 Titanium 125°/TT 151-103, 130°/TT 151-203, 140°/TT 151-403  
 S.S. 316LVM 125°/LM 151-103, 130°/LM 151-203, 140°/LM 151-403

Code No. S.S. 316L	Code No. Titanium	Angled	Hole
SS 151-303	TT 151-303	135°	3
SS 151-304	TT 151-304	135°	4
SS 151-305	TT 151-305	135°	5
SS 151-306	TT 151-306	135°	6
SS 151-307	TT 151-307	135°	7
SS 151-308	TT 151-308	135°	8
SS 151-309	TT 151-309	135°	9
SS 151-310	TT 151-310	135°	10
SS 151-312	TT 151-312	135°	12
SS 151-314	TT 151-314	135°	14
SS 151-316	TT 151-316	135°	16



**DHS Barrel Plate DCP Hole (Barrel Length 38mm)**

Also Available 125°,130°,140°,  
 Code For S.S. 316L 125°/SS 152-103, 130°/SS 152-203, 140°/SS 152-403  
 Titanium 125°/TT 152-103, 130°/TT 152-203, 140°/TT 152-403  
 S.S. 316LVM 125°/LM 152-103, 130°/LM 152-203, 140°/LM 152-403

Code No. S.S. 316L	Code No. Titanium	Angled	Hole
SS 152-303	TT 152-303	135°	3
SS 152-304	TT 152-304	135°	4
SS 152-305	TT 152-305	135°	5
SS 152-306	TT 152-306	135°	6
SS 152-307	TT 152-307	135°	7
SS 152-308	TT 152-308	135°	8
SS 152-309	TT 152-309	135°	9
SS 152-310	TT 152-310	135°	10
SS 152-312	TT 152-312	135°	12
SS 152-314	TT 152-314	135°	14
SS 152-316	TT 152-316	135°	16



### DHS Barrel Plate Round Hole (Barrel Length 25mm)

Also Available 125°, 130°, 140°  
 Code For S.S. 316L 125°/SS 165-103, 130°/SS 165-203, 140°/SS 165-403  
 Titanium 125°/TT 165-103, 130°/TT 165-203, 140°/TT 165-403  
 S.S. 316LVM 125°/LM 165-103, 130°/LM 165-203, 140°/LM 165-403

Code No. S.S. 316L	Code No. Titanium	Angled	Hole
SS 165-303	TT 165-303	135°	3
SS 165-304	TT 165-304	135°	4
SS 165-305	TT 165-305	135°	5
SS 165-306	TT 165-306	135°	6
SS 165-307	TT 165-307	135°	7
SS 165-308	TT 165-308	135°	8
SS 165-309	TT 165-309	135°	9
SS 165-310	TT 165-310	135°	10
SS 165-312	TT 165-312	135°	12
SS 165-314	TT 165-314	135°	14
SS 165-316	TT 165-316	135°	16



### DHS Barrel Plate DCP Hole (Barrel Length 25mm)

Also Available 125°, 130°, 140°  
 Code For S.S. 316L 125°/SS 166-103, 130°/SS 166-203, 140°/SS 166-403  
 Titanium 125°/TT 166-103, 130°/TT 166-203, 140°/TT 166-403  
 S.S. 316LVM 125°/LM 166-103, 130°/LM 166-203, 140°/LM 166-403

Code No. S.S. 316L	Code No. Titanium	Angled	Hole
SS 166-303	TT 166-303	135°	3
SS 166-304	TT 166-304	135°	4
SS 166-305	TT 166-305	135°	5
SS 166-306	TT 166-306	135°	6
SS 166-307	TT 166-307	135°	7
SS 166-308	TT 166-308	135°	8
SS 166-309	TT 166-309	135°	9
SS 166-310	TT 166-310	135°	10
SS 166-312	TT 166-312	135°	12
SS 166-314	TT 166-314	135°	14
SS 166-316	TT 166-316	135°	16



### DHS Pediatric Plate

Code No. S.S. 316L	Code No. Titanium	Angled	Hole
SS 163-303	TT 163-303	135°	3
SS 163-304	TT 163-304	135°	4
SS 163-305	TT 163-305	135°	5
SS 163-306	TT 163-306	135°	6



### 95° DCS Barrel Plate Round Hole

Code No. S.S. 316L	Code No. Titanium	Angled	Hole
SS 153-002	TT 153-002	95°	2+2
SS 153-003	TT 153-003	95°	3+2
SS 153-004	TT 153-004	95°	4+2
SS 153-005	TT 153-005	95°	5+2
SS 153-006	TT 153-006	95°	6+2
SS 153-007	TT 153-007	95°	7+2
SS 153-008	TT 153-008	95°	8+2
SS 153-009	TT 153-009	95°	9+2
SS 153-010	TT 153-010	95°	10+2
SS 153-012	TT 153-012	95°	12+2
SS 153-014	TT 153-014	95°	14+2
SS 153-016	TT 153-016	95°	16+2



### 95° DCS Barrel Plate DCP Hole

Code No. S.S. 316L	Code No. Titanium	Angled	Hole
SS 154-002	TT 154-002	95°	2+2
SS 154-003	TT 154-003	95°	3+2
SS 154-004	TT 154-004	95°	4+2
SS 154-005	TT 154-005	95°	5+2
SS 154-006	TT 154-006	95°	6+2
SS 154-007	TT 154-007	95°	7+2
SS 154-008	TT 154-008	95°	8+2
SS 154-009	TT 154-009	95°	9+2
SS 154-010	TT 154-010	95°	10+2
SS 154-012	TT 154-012	95°	12+2
SS 154-014	TT 154-014	95°	14+2
SS 154-016	TT 154-016	95°	16+2



Implants Certified by: **CE**  
**XXXX**

Instruments Certified by Self Declaration : **CE**



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