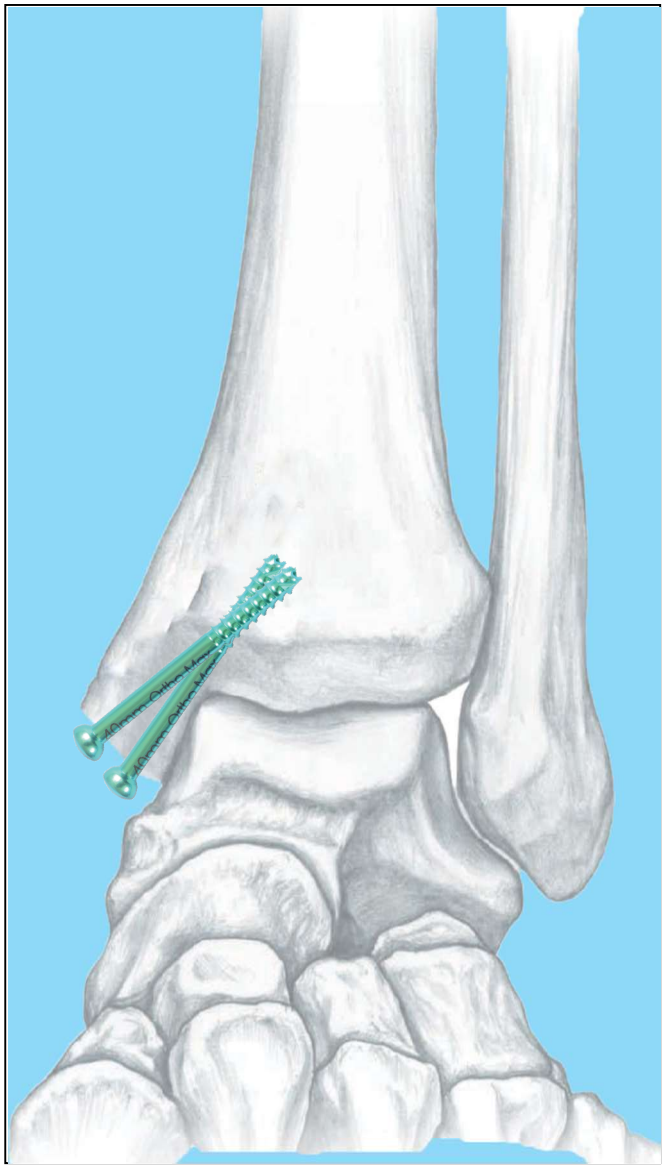
Cannulated Cancellous Screws (C.C.) – 6.5mm & 4mm – Surgical Technique

CE 1023



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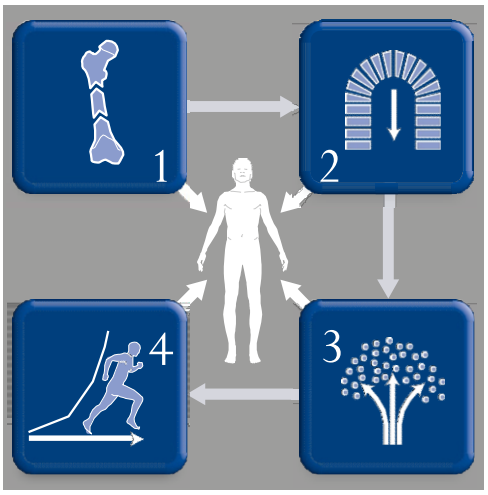
AO Principles

In 1958, the AO formulated four basic principles, which have become the guidelines for internal fixation.



Anatomic reduction

Fracture reduction and fixation to restore anatomical relationships.

Early, active mobilization

Early and safe mobilization and rehabilitation of the injured part and the patient as a whole.

Stable fixation

Fracture fixation providing absolute or relative stability, as required by the patient, the injury, and the personality of the fracture.

Preservation of blood supply Preservation of the blood supply to soft tissues and bone by gentle reduction techniques and careful handling.

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INDICATIONS:

C.C. 4mm:

Fixation of fractures of medium fragments, e.g.:
-Tarsal and metatarsal fractures and fixation in metatarsal and phalangeal osteotomies
-Tarsometatarsal and metatarsophalangeal arthrodeses
-Ligament fixations
-Hallux valgus corrections

C.C. 6.5mm:

Fixation of fractures of large fragments, e.g.:
-Femoral neck fractures
-Intercondylar femoral fractures
-Epiphyseolysis of the femoral head
-Ankle arthrodeses
-Iliosacral dislocations

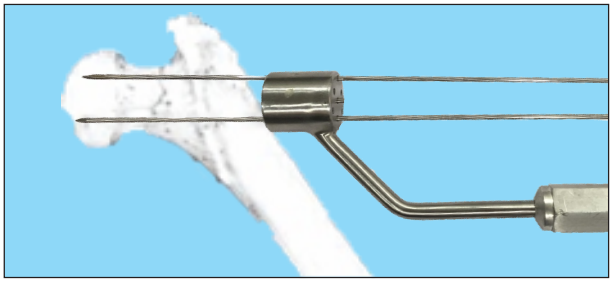
Warning: These screws are not recommended for screw fixation to the posterior elements (pedicles) of the cervical, thoracic or lumbar spine.

Percutaneous Technique of C.C. Screws - 6.5mm

1. Reduce the fracture and make an incision of approx. 5 cm.

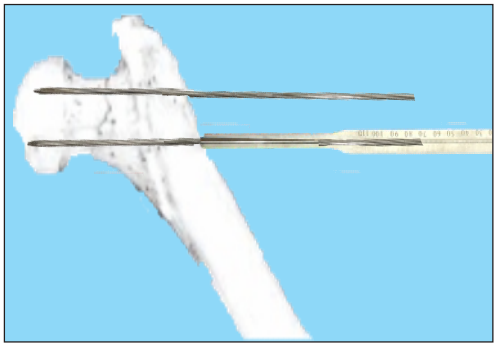
Insert multiple guide wire(s) using Parallel Guide.

Insert the Paralled guide through a stab incision and through the soft tissue to the bone. Select hole pattern and insert 1.8 mm guide wires through the preselected holes.



Note: The paralled guide will allow placement of washers when wires are placed through nonadjacent holes. Placement through adjacent holes will allow clearance

for screws but not for washers.



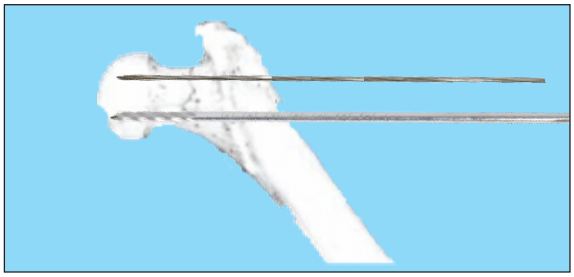
2. Measure for screw length

Remove parallel guide and slide the tapered end of the CC Direct Measuring Device over the guide wire. Read the scale at the end of 225mm wires to determine insertion depth of wire and appropriate screw length.

Notes:

– The reading indicates the screw length that will place the screw at the tip of the guide wire. Subtract appropriately for any anticipated interfragmentary compression resulting from screw insertion. Only use the guide wire in its original length to ensure correct measurement.

3. Drilling :

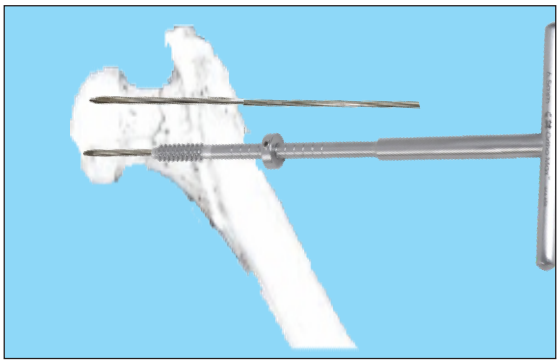


Even though the screws are self-tapping, the desired length must be predrilled with the cannulated drill bit of 4.5mm dia. The drill bit is having a calibration showing drill depth which can be considered as measure earlier.

4. Tapping:

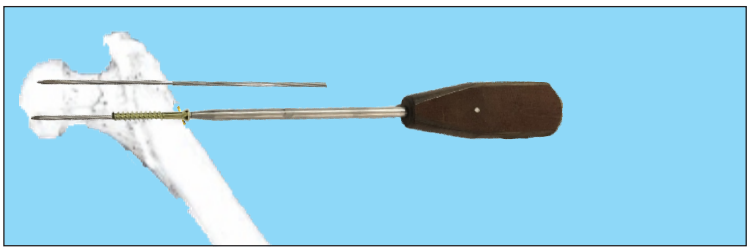
Where necessary, tap the near cortex with the cannulated tap

For 6.5mm.



5. Insert screws:

Using the cannulated screwdriver 6.5mm, place the appropriate length screw over the guide wire and insert into the bone. Remove and discard the guide wire.



Procedure for osteoporotic bones:

In osteoporotic bone, the screw head can be prevented from sinking into the bone by using a washer. Avoid tightening the screw very firmly, because otherwise the thread may strip and the screw‘s grip in the bone could be compromised.

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Implant removal

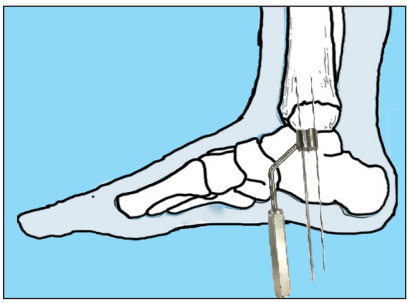
Expose the screw head and remove the screws using the Hexagonal screwdriver 4.5mm for the removal of cannulated screws.

Precaution: Do not use the cannulated screwdriver for implant removal as the tip of Cannulated screw driver may slip off during removal if extra force is applied.

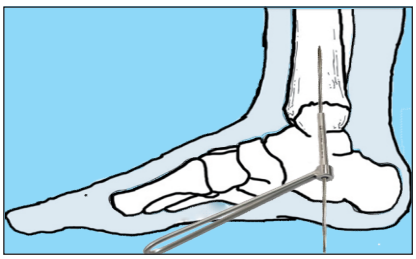
PERCUTANEOUS INSERTION OF C.C. SCREWS- 4mm

1. Reduce fracture and insert guide wire:

After a stab incision, advance the drill sleeve or drill sleeve assembly through the soft tissues to the bone. Insert the guide wire through the Drill sleeve to the desired depth and position. Remove the drill sleeve and check the position of the guide wire of 1.2mm under the image Intensifier.

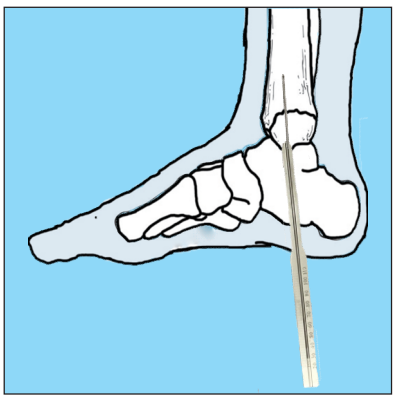


Use the adjustable parallel wire guide to place parallel wires at various distances from the first wire.



2. Measure for screw length:

Remove the two inner drill sleeves. Slide the tapered end of the cannulated screw direct measuring device over the guide wire to the bone. Read the scale at the end of the guide wire to determine appropriate screw length. This reading will show full length of the screw match with the guide wire tip and will not allow the threaded portion of the guide wire to remain in the bone during screw insertion.

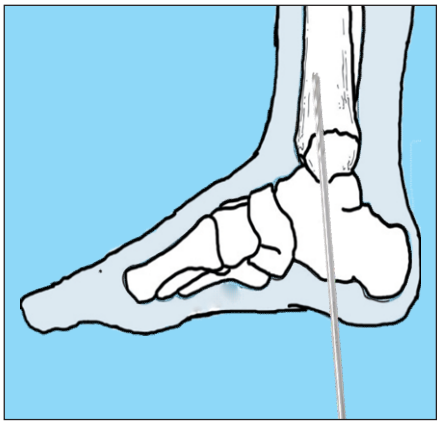


e.g.: If the reading indicates 40mm, use a 35 mm screw to place the screw 5 mm short of the wire tip.

Cannulated Cancellous Screws (C.C.) – 6.5mm & 4mm – Surgical Technique

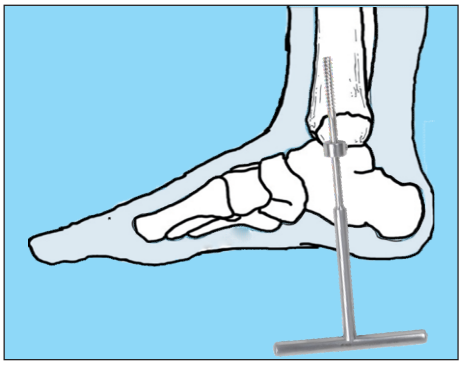
3. Drilling:

To pre-drill in dense bone, drill through the near cortex with the 3.2 mm cannulated drill bit on guide wire. Calibration marking is given on Drill bit to see the drill depth as desired.



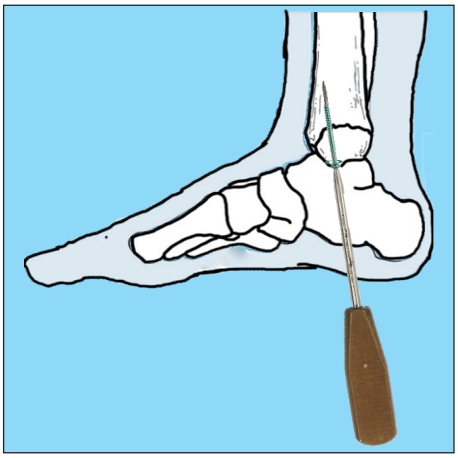
4. Tapping:

Where necessary, tap the near cortex with the cannulated tap
For 4mm.



5. Insert screw:

Place the appropriate length of screw over the guide wire. Use the cannulated screwdriver 4mm to insert the screw. Remove and discard the guide wire.



Cannulated Cancellous Screws (C.C.) – 6.5mm & 4mm – Surgical Technique

Procedure for osteoporotic bones:

In osteoporotic bone, the screw head can be prevented from sinking into the bone by using a washer. Avoid tightening the screw very firmly, because otherwise the thread may strip and the screw's grip in the bone could be compromised.

CAUTION:

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 fail 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 reuses of implants are 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 MATERIAL 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 ways 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.

MRI SAFETY INFORMATION

- Ortho Max Mfg. Co Pvt. Ltd. implants are manufactured from Titanium Gr.2, SS316L, SS316LVM material for Bone Plate & Titanium Gr.5, SS316L, SS316LVM material for

Bone Screw, Pins & Wires, both are non-magnetic material, hence it do 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 Ortho Max Mfg. Co Pvt. Ltd. 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.

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.

END OF SURGICAL TECHNIQUE

Cannulated Cancellous Screws (C.C.) – 6.5mm & 4mm – Surgical Technique

Product Details :

Others Implants

Cannulated Cancellous (C. C.) Screws 6.5mm
16mm Thread

Size	S.S.	Titanium
25mm	105.125	228.225
30mm	105.130	228.230
35mm	105.135	228.235
40mm	105.140	228.240
45mm	105.145	228.245
50mm	105.150	228.250
55mm	105.155	228.255
60mm	105.160	228.260
65mm	105.165	228.265
70mm	105.170	228.270
75mm	105.175	228.275
80mm	105.180	228.280
85mm	105.185	228.285
90mm	105.190	228.290
95mm	105.195	228.295
100mm	105.1100	228.2100
105mm	105.1105	228.2105
110mm	105.1110	228.2110
115mm	105.1115	228.2115
120mm	105.1120	228.2120
125mm	105.1125	228.2125
130mm	105.1130	228.2130

Intended Use	For Hip / Femoral Neck / Tibial Condylar Fracture Fixation
Profile	Core Dia. 4.5mm, 3.5mm Hex. 1.8mm Cannulation
Material	SS 316L & Titanium

Cannulated Cancellous (C. C.) Screws 6.5mm
32mm Thread

Size	S.S.	Titanium
40mm	105.240	228.340
45mm	105.245	228.345
50mm	105.250	228.350
55mm	105.255	228.355
60mm	105.260	228.360
65mm	105.265	228.365
70mm	105.270	228.370
75mm	105.275	228.375
80mm	105.280	228.380
85mm	105.285	228.385
90mm	105.290	228.390
95mm	105.295	228.395
100mm	105.2100	228.3100

Intended Use	For Hip / Femoral Neck / Tibial Condylar Fracture Fixation
Profile	Core Dia. 4.5mm, 3.5mm Hex. 1.8mm Cannulation
Material	SS 316L & Titanium

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Cannulated Cancellous Screws (C.C.) – 6.5mm & 4mm – Surgical Technique

Others Implants

Cannulated Cancellous (C. C.) Screws 6.5mm
Full Thread

Size	S.S.	Titanium
30mm	105.330	228.430
35mm	105.335	228.435
40mm	105.340	228.440
45mm	105.345	228.445
50mm	105.350	228.450
55mm	105.355	228.455
60mm	105.360	228.460
65mm	105.365	228.465
70mm	105.370	228.470
75mm	105.375	228.475
80mm	105.380	228.480
85mm	105.385	228.485
90mm	105.390	228.490
95mm	105.395	228.495
100mm	105.3100	228.4100

Intended Use	For Hip / Femoral Neck / Tibial Condylar Fracture Fixation
Profile	Core Dia. 4.5mm, 3.5mm Hex. 1.8mm Cannulation
Material	SS 316L & Titanium

Cannulated Cancellous (C. C.) Screws 4mm
Short Thread

Size	S.S.	Titanium
20mm	106.120	228.120
25mm	106.125	228.125
30mm	106.130	228.130
35mm	106.135	228.135
40mm	106.140	228.140
45mm	106.145	228.145
50mm	106.150	228.150
55mm	106.155	228.155
60mm	106.160	228.160
65mm	106.165	228.165
70mm	106.170	228.170
75mm	106.175	228.175
80mm	106.180	228.180

Intended Use	For Subcondylar Fracture Fixation in Humerus / Tibia
Profile	Core dia 3.2mm, 2.5mm Hex, 1.2mm Cannulation
Material	SS 316L & Titanium

Cannulated Cancellous (C. C.) Screws 4mm
Full Thread

Size	S.S.	Titanium
20mm	106.220	228.520
25mm	106.225	228.525
30mm	106.230	228.530
35mm	106.235	228.535
40mm	106.240	228.540
45mm	106.245	228.545
50mm	106.250	228.550
55mm	106.255	228.555
60mm	106.260	228.560
65mm	106.265	228.565
70mm	106.270	228.570
75mm	106.275	228.575
80mm	106.280	228.280

Intended Use	For Subcondylar Fracture Fixation in Humerus / Tibia
Profile	Core dia 3.2mm, 2.5mm Hex, 1.2mm Cannulation
Material	SS 316L & Titanium

Cannulated Cancellous Screws (C.C.) – 6.5mm & 4mm – Surgical Technique

Others Implants

Cannulated Cancellous (C. C.) Screws 5mm
16mm Thread

Size	S.S.	Titanium
25mm	200.125	-
30mm	200.130	-
35mm	200.135	-
40mm	200.140	-
45mm	200.145	–
50mm	200.150	-
55mm	200.155	-
60mm	200.160	-
65mm	200.165	–
70mm	200.170	-
75mm	200.175	-
80mm	200.180	-
85mm	200.185	-
90mm	200.190	-
95mm	200.195	–
100mm	200.1100	-

Intended Use	For Subcondylar Fracture Fixation in Humerus / Tibia
Profile	Core Dia. 4mm, 3.5mm Hex., 1.5mm Cannulation
Material	SS 316L & Titanium

Washer For Cancellous Screws

Size	S.S.	Titanium
4mm	107.040	229.040
6.5mm	107.065	229.065

Intended Use	To be used with Cancellous Screws
Profile	1.5mm for 4mm, 2mm for 6.5mm
Material	SS 316L & Titanium

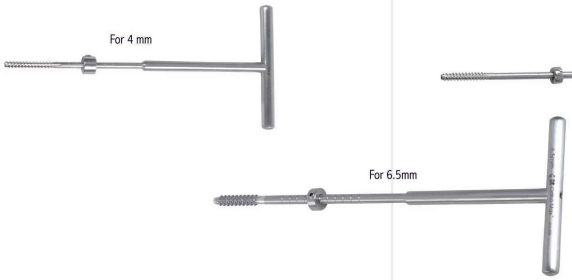
Cannulated Cancellous Screws (C.C.) – 6.5mm & 4mm – Surgical Technique

INSTRUMENTS FOR CANNU. CANCELLOUS (C.C.) SCREWS

C.C. Drill Bit

Reference	Size
620.400	For 4 mm
620.500	5 mm
615.650	6.5 mm

C.C. Tap



Reference	Size
621.400	For 4 mm
621.500	5 mm
616.650	6.5 mm

C.C. Screw Driver

Reference	Size
622.400	For 4 mm
617.650	For 5/6.5 mm

Parallel Guide with Spokes

Reference	Size
624.400	For 4 mm
619.650	For 6.5 mm

Guide Wire Threaded

Reference	Size
623.129	1.2 mm x 9"
623.159	1.5 mm x 9"
618.189	1.8 mm x 9"

Container For Implants & Instruments for C. C. Screws

Reference
797.003

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Ortho Max®
Mfg. Co. Pvt. Ltd.

Implants Certified by ITC : CE 1023

Instruments Certified by Self Declaration : CE

Ortho Max Mfg. Co. Pvt. Ltd.

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