## Titanium Plates and Screws for Open Wedge HTO

Surgical Technique



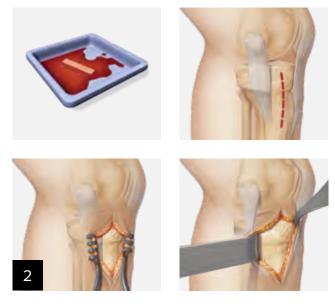


## Tibial Opening Wedge Osteotomy System With Titanium Plates and Screws



Using the full-length, standing A/P radiograph, a line is drawn from the center of the femoral head to the center of the tibial-talar joint. This marks the patient's mechanical axis. Another line is drawn from the center of the femoral head to a point midway in the lateral knee joint.\* A final line is drawn from the center of the tibial-talar joint to the same point in the lateral knee joint. The angle formed by the intersection of these two lines determines the degree of correction required to return the patient's mechanical axis to the point of intersection on the lateral side. Prior to final fixation, the alignment will be verified by external examination and fluoroscopy.

\*This point is located at 62.5 % of the width of the proximal tibia (i.e., 80 mm [width of proximal tibia]  $\times 0.625 = 50$  mm).



Soak the INNOTERE 3D wedge in autologous blood or plasma products prior to implantation. An incision is made between the MCL and the patellar tendon and the soft tissue is reflected down to the region of the superficial MCL.



After reflecting back the superficial portion of the medial collateral ligament, the cutting guide for HTO is positioned at the medial tibia above the level of the tibial tubercle. Two osteotomy guide pins are drilled 1 cm into the lateral cortex through the guide (angled towards the fibular head).



An oscillating saw positioned against the inferior surface of the cutting guide is used to cut the tibial cortex medially, anteriorly and posteriorly.

Note: To prevent blockage of the sawblade and damage to the retractor please avoid hitting radiolucent retractor (AR-13311) for longer and with more power than necessary.



A single blade from the Osteotomy Jack may be used to complete the osteotomy. Fluoroscopic imaging should be checked repeatedly throughout the cutting process.



Insert both blades of the Osteotomy Jack in the bone cut, aligning both blades to each other. Using the 3.5 mm Hex screwdriver, turn the screw slowly, opening the Osteotomy Jack to the desired correction (the wedge trial for HTO may be used to estimate the correction).

Be sure to maintain the lateral tibial cortex hinge.



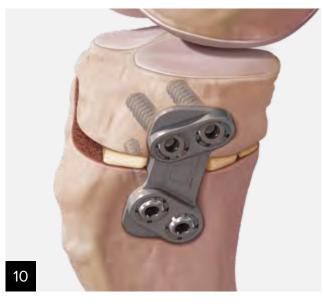
Insert the osteotomy wedge trials into the osteotomy to check the alignment of the extremity, verifying the degree of correction. The amount of opening wedge correction may be read off of the millimeter markings on each wedge tine. Once placed, remove the osteotomy wedge trial handle leaving the wedge trials in place.



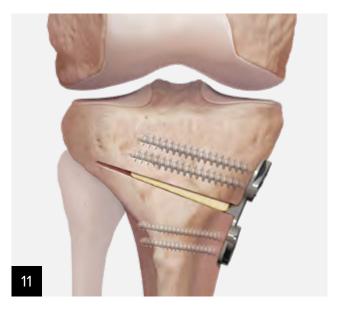
Insert the plate into the osteotomy between the wedge trials with the application bar for HTO plates. Alternatively, the osteotomy can be held open with lamina spreaders while the plate is placed. Remove the wedge trials and load the extremity to close the osteotomy onto the tooth of the plate, ensuring optimum bone-to-tooth contact.



Insert the drill guide into the locking bushing and drill a hole to the appropriate screw depth (screw length is determined by visualizing the laser marks on the drill as it exits the drill guide). Install the proximal 6.5 mm cancellous screws first from posterior to anterior. The screws will lock into the bushings when fully seated.



Insert INNOTERE 3D osteotomy wedges soaked in autologous blood or plasma products into the osteotomy to fill the void. Load the extremity and insert the distal 4.5 mm cortical screws.



The remainder of the osteotomy can be filled with INNOTERE 3D wedges soaked in autologous blood or plasma products or INNOTERE Paste-CPC.

Tibial opening wedge osteotomy plate, 17.5 mm

## Opening Wedge Osteotomy System Set (AR-13305S)

Product Description	Item Number	Product Description	Item Numbe
Accessories		Titanium Screws	
Patellar tendon retractor	AR- <b>13312</b>	HTO plate screw, 4.5 mm x 26 mm, cortical	AR- <b>13380-2</b> 0
Medial retractor for HTO	AR- <b>13313</b>	HTO plate screw, 4.5 mm x 28 mm, cortical	AR-13380-2
Osteotomy guide pins, 2.4 mm, qty. 6	AR-13303-2.4	HTO plate screw, 4.5 mm x 30 mm, cortical	AR-13380-3
Osteotomy guide pins, 3 mm, qty. 6	AR-13303-3.0	HTO plate screw, 4.5 mm x 32 mm, cortical	AR-13380-32
Drill for HTO titanium screws	AR- <b>13319</b>	HTO plate screw, 4.5 mm x 34 mm, cortical	AR- <b>13380-3</b> 4
Osteotomy Jack, 25 mm	AR- <b>13323-25</b>	HTO plate screw, 4.5 mm x 36 mm, cortical	AR- <b>13380-3</b>
Bone Graft Substitute		HTO plate screw, 4.5 mm x 38 mm, cortical	AR- <b>13380-3</b>
	721TS1	HTO plate screw, 4.5 mm x 40 mm, cortical	AR-13380-40
INNOTERE osteotomy wedge, 7 mm x 30 mm INNOTERE osteotomy wedge, 10 mm x 30 mm	7211S1 721TS2	HTO plate screw, 4.5 mm x 42 mm, cortical	AR-13380-42
INNOTERE osteotomy wedge, 10 mm x 30 mm	721132 721TS3	HTO plate screw, 4.5 mm x 44 mm, cortical	AR- <b>13380-4</b> 4
INNOTERE osteotomy wedge, 12 mm x 35 mm	721135 721TS4	HTO plate screw, 4.5 mm x 46 mm, cortical	AR- <b>13380-4</b>
, ,		HTO plate screw, 4.5 mm x 48 mm, cortical	AR- <b>13380-4</b>
INNOTERE Paste-CPC, 0.5 cc	211IP2	HTO plate screw, 4.5 mm x 50 mm, cortical	AR- <b>13380-5</b>
INNOTERE Paste-CPC, 1 cc	211IP1	HTO plate screw, 4.5 mm x 52 mm, cortical	AR-13380-5
INNOTERE Paste-CPC, 3 × 1 cc	231IP1	HTO plate screw, 4.5 mm x 54 mm, cortical	AR-13380-5
INNOTERE Paste-CPC, 3 cc	111VX2	HTO plate screw, 4.5 mm x 56 mm, cortical	AR-13380-5
INNOTERE Paste-CPC, 6 cc	311IP2	HTO plate screw, 4.5 mm x 58 mm, cortical	AR-13380-5
INNOTERE Paste-CPC, 12 cc	311IP1	HTO plate screw, 4.5 mm x 60 mm, cortical	AR- <b>13380-6</b>
Titanium Plates		HTO plate screw, 6.5 mm x 35 mm, cancellous	AR- <b>13280-3</b>
Tibial A/P sloped osteotomy plate, 5 mm	AR-13200ST-05.0	HTO plate screw, 6.5 mm x 40 mm, cancellous	AR- <b>13280-4</b>
Tibial A/P sloped osteotomy plate, 7.5 mm	AR-13200ST-07.5	HTO plate screw, 6.5 mm x 45 mm, cancellous	AR- <b>13280-4</b>
Tibial A/P sloped osteotomy plate, 9 mm	AR-13200ST-09.0	HTO plate screw, 6.5 mm x 50 mm, cancellous	AR-13280-5
Tibial A/P sloped osteotomy plate, 10 mm	AR-13200ST-10.0	HTO plate screw, 6.5 mm x 55 mm, cancellous	AR-13280-5
Tibial A/P sloped osteotomy plate, 11 mm	AR-13200ST-11.0	HTO plate screw, 6.5 mm x 60 mm, cancellous	AR- <b>13280-6</b>
Tibial A/P sloped osteotomy plate, 12.5 mm	AR-13200ST-12.5	HTO plate screw, 6.5 mm x 65 mm, cancellous	AR-13280-6
Tibial A/P sloped osteotomy plate, 15 mm	AR-13200ST-15.0	HTO plate screw, 6.5 mm x 70 mm, cancellous	AR- <b>13280-7</b>
Tibial A/P sloped osteotomy plate, 17.5 mm	AR-13200ST-17.5		
Tibial opening wedge osteotomy plate, 3 mm	AR-13200T-03.0		
Tibial opening wedge osteotomy plate, 5 mm	AR- <b>13200T-05.0</b>		
Tibial opening wedge osteotomy plate, 7.5 mm	AR- <b>13200T-07.5</b>		
Tibial opening wedge osteotomy plate, 9 mm	AR- <b>13200T-09.0</b>		
Tibial opening wedge osteotomy plate, 10 mm	AR- <b>13200T-10.0</b>		
Tibial opening wedge osteotomy plate, 11 mm	AR- <b>13200T-11.0</b>		
Tibial opening wedge osteotomy plate, 12.5 mm	AR-13200T-12.5		
Tibial opening wedge osteotomy plate, 15 mm	AR- <b>13200T-15.0</b>		

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AR-13200T-17.5



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