

### Freedom of Choice

These next-generation locking plates enhance flexibility during surgery, with polyaxial screw placement (30°) cone and improved angular stability. Equipped with a locking screw technology, the MIS enabled *NCB* Polyaxial Locking Plate System offers options to deal with complex fractures of the Proximal Humerus, the Distal Femur and the Proximal Tibia. All *NCB* Plates are made of *Protasul*®-64 Titanium Alloy.



*NCB Proximal Humerus System*

*NCB Distal Femur System*

*NCB Proximal Tibia System*

### Polyaxiality

The *NCB* Plate Technology allows polyaxial screw placement (30° cone) with screw locking achieved through the use of locking caps that are threaded into the plate holes. The locking construct improves stability especially in poor bone quality.

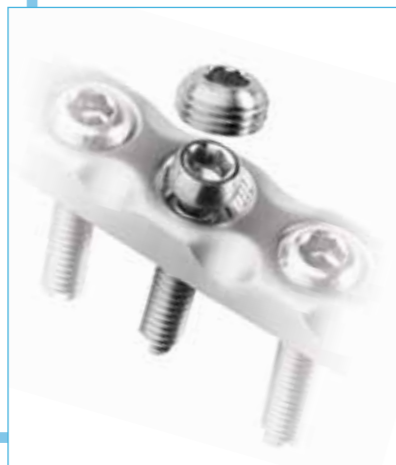


*NCB 30° Cone Polyaxiality*

*Angular stability with the NCB Locking Caps*

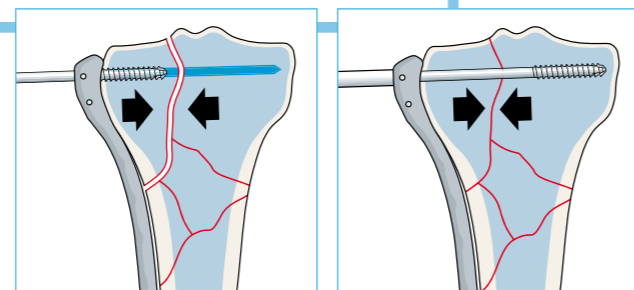
### Bone Quality Feedback

In all *NCB* Plates, the angular stability is achieved using the *NCB* Locking Caps over the *NCB* Screws. Unlike conventional locking plates, *NCB* Screws are not threaded into the *NCB* Plates. This different locking mechanism allows surgeons to get tactile feedback of bone quality when tightening *NCB* Screws.



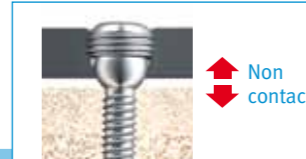
### Fracture Reduction

Before locking, *NCB* Screws can act as lag screws. Therefore, *NCB* Screws can be used for fracture reduction and apply interfragmental compression, a feature not offered with conventional locking systems.



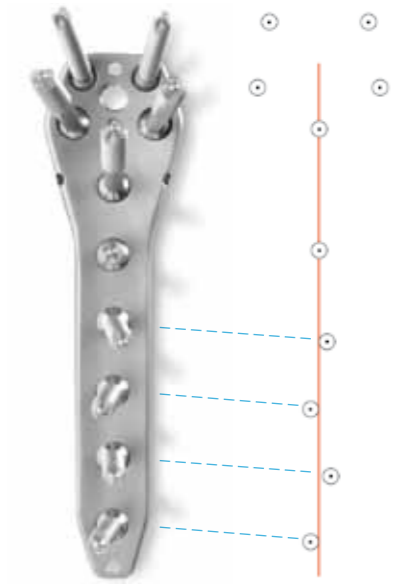
### Non-Contact Bridging

In the locked mode the *NCB* Plate acts as an internal fixator without contact between the plate and the bone surface, which may reduce the risk of impairment to the periosteal blood supply. This Non-Contact Bridging concept can also be controlled through the use of 1, 2 or 3mm spacers, which are threaded into the plate holes prior to plate insertion.



### Enhanced Diaphyseal Fixation

Divergent screw alignment for increased pull-out resistance in the diaphyseal region, even with the MIS Targeting Device.



### Screw Options

The *NCB* Screws (solid and cannulated) are available with different types of screw thread, for cortical or cancellous bone. The screws designed for cortical bone have an increased core diameter and are machined-tooled with a double lead thread for fast insertion. Cannulated screws can be placed with high precision – no predrilling is required as they are self-drilling and self-tapping. 4.5mm cancellous and 4.0mm cortical screws are available.

<i>NCB</i> ® Cancellous Screw Ø 4.5mm	<i>NCB</i> ® Cortical Screw Ø 4.0mm	<i>NCB</i> ® Cancellous Cannulated Screw Ø 4.5mm
self-tapping for <i>NCB</i> -PH	self-tapping for <i>NCB</i> -PH and <i>NCB</i> -PT	self-drill for <i>NCB</i> -PH and <i>NCB</i> -PT
<i>NCB</i> ® Cortical Cannulated Screw Ø 4.0mm	<i>NCB</i> ® Cancellous Screw Ø 5.0mm	<i>NCB</i> ® Cortical Screw Ø 5.0mm
self-drill for <i>NCB</i> -PH	self-tapping for <i>NCB</i> -DF and <i>NCB</i> -PT	self-tapping for <i>NCB</i> -DF

### MIS Technique

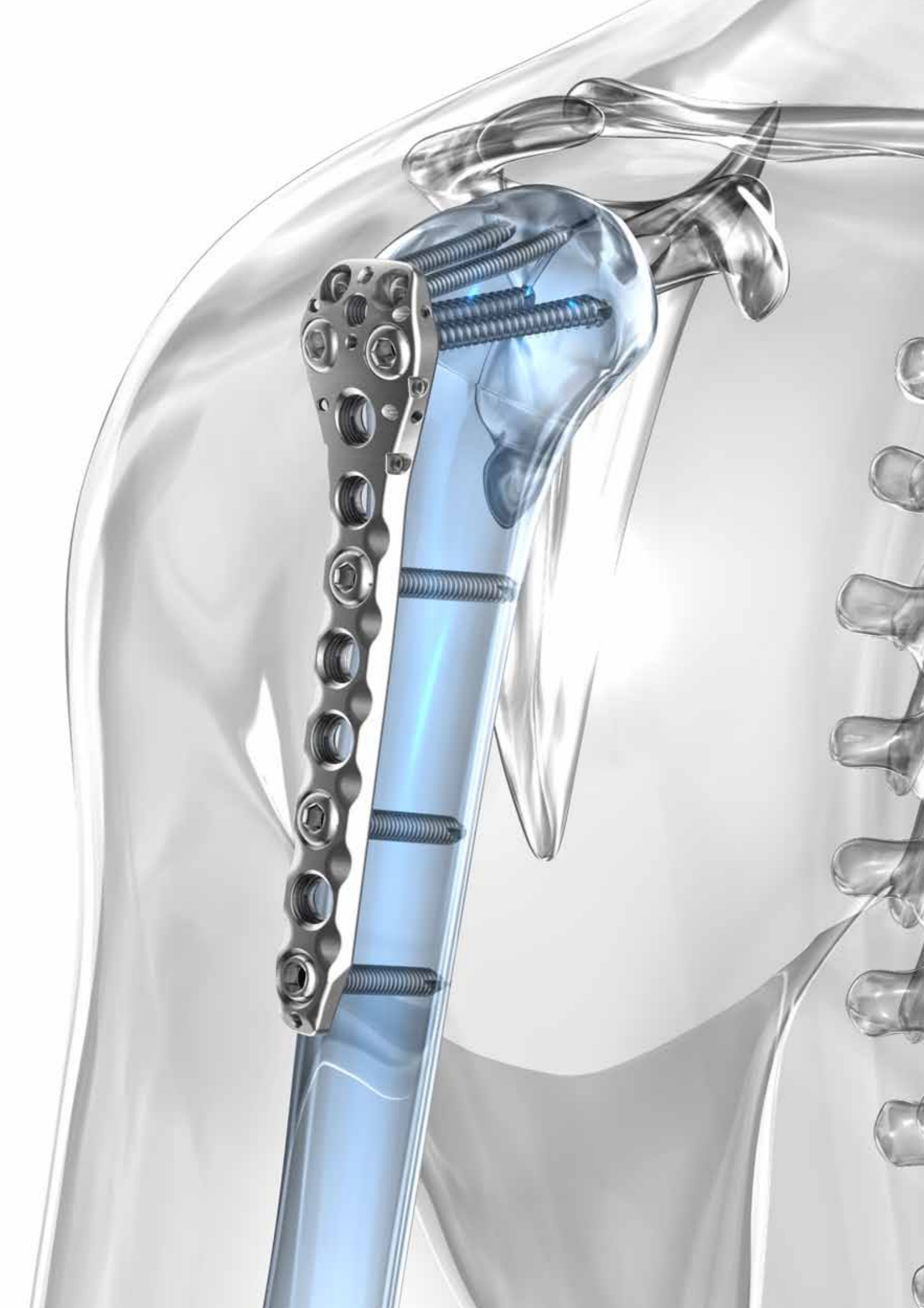
The percutaneous plate and screw insertion technique continues Zimmer's success in devising Minimally Invasive Solutions™. Requiring a smaller than normal incision, there is less damage to surrounding soft tissue and a reduced risk of complications with wound healing.<sup>1,2,3</sup>



*Proximal Humeral Targeting Device*

*Distal Femoral Targeting Device*

*Proximal Tibial Targeting Device*



## Good to know



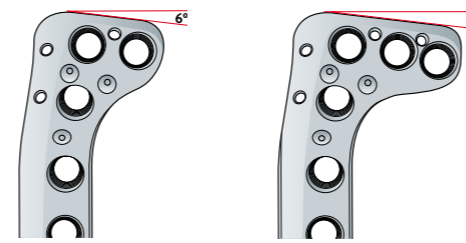
### Cable Fixation Options

The products from the Zimmer® Cable-Ready® Cable Grip System are compatible with the NCB Polyaxial Locking Plate System.



### NCB Proximal Humerus Plate

Oblique holes  $\varnothing$  2mm can be used for sutures after plate osteosynthesis.



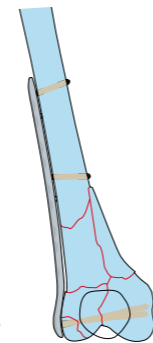
2-proximal holes plate

3-proximal holes plate

### NCB Proximal Tibia Plate

Two versions of the NCB PT Plate are available: 2-proximal and 3-proximal holes.

Plate head has 6° posterior tilt to match the lateral tibial contour.



Varus/valgus corrections

### NCB Distal Femur Plate

The polyaxiality of the system allows some varus/valgus correction during surgery.

For this purpose insert four screws as shown in the figure without tightening the screws. Place the two distal screws anterior and posterior.

Now the fracture can be reduced by rotation around the bone axis of the proximal fragment and varus/valgus correction of the distal fragment.

### Disclaimer

This documentation is intended exclusively for physicians and is not intended for laypersons. Information on the products and procedures contained in this document is of a general nature and does not represent and does not constitute medical advice or recommendations. Because this information does not purport to constitute any diagnostic or therapeutic statement with regard to any individual medical case, each patient must be examined and advised individually, and this document does not replace the need for such examination and/or advice in whole or in part.

Please refer to the package inserts for important product information, including, but not limited to, contraindications, warnings, precautions, and adverse effects.

1 Biggi, F. et al.: Tibial plateau fractures: Internal fixation with locking plates and the MPO technique, Injury - International Journal of the Care of the Injured, Vol. 41, p. 1178 - 1182, 2010  
 2 Ruedi, T.P., Buckley, R.E., Moran, C.G.: AO Principles of Fracture Management - Second expanded edition, Volume 1: Principles, AO Publishing, Switzerland, 2007  
 3 Resch, H., Hubner, C., Schwagerl, R.: Minimally invasive reduction and osteosynthesis of articular fractures of the humeral head, Injury - International Journal of the Care of the Injured, 2001;32 Suppl 1):S425-32

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## + Product Features Overview

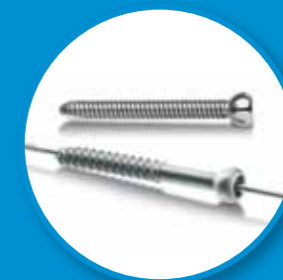
# Plating Solutions NCB® Polyaxial Locking Plate System



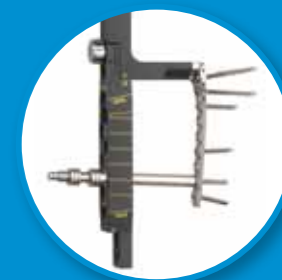
Innovative  
Plate Design



Polyaxiality



Screw Choice



MIS  
Instruments

