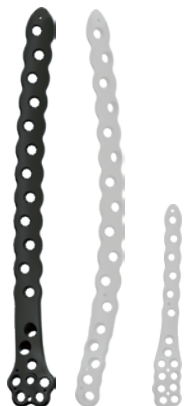


# Pangea™

## Distal Lateral Femur Plate

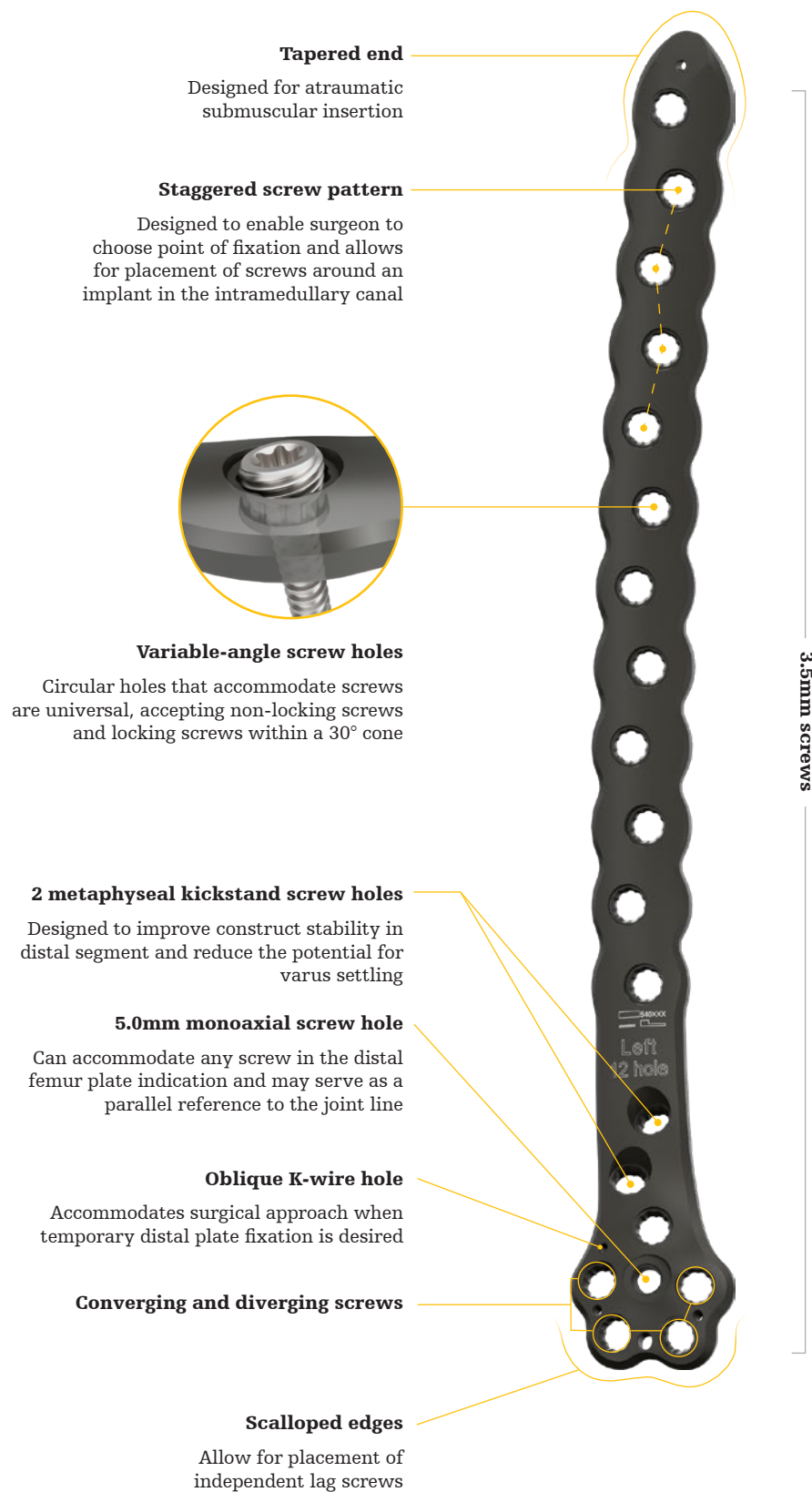
Design rationale



# Pangea™ Distal Lateral Femur Plate

Design rationale

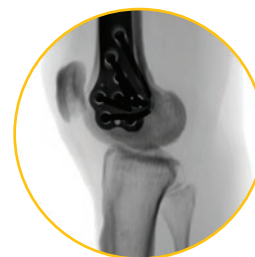
stryker



## Plate placement



- The distal and anterior margin of the plate should sit along the border of the articular surface
- Plate designed to sit 5-10mm from the anterior surface and 5-10mm from the distal surface of the femur
- Plate is designed to sit more posterior in distal segment than other competitive plates to give space for independent lag screw fixation and is contoured to account for iatrogenic malalignment that is seen with other plate designs<sup>1,2</sup>



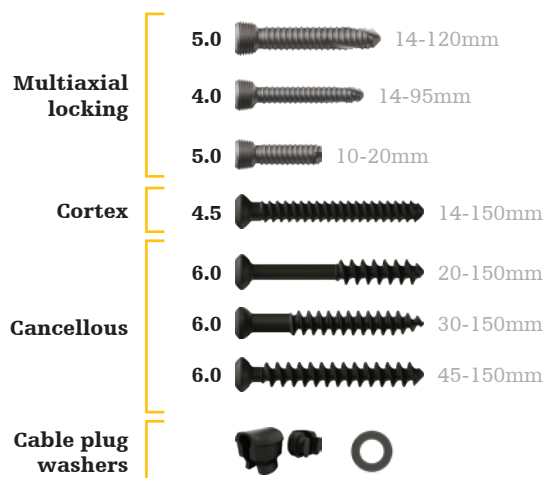
### Fit

- Designed with the use of SOMA: Stryker Orthopedics Modeling and Analytics
- SOMA includes a database with CT scans from hospitals across the world and state-of-the-art algorithms to mine the data for shape variability, bone density, and implant fit<sup>3</sup>
- Pangea Distal Lateral Femur plates were found to sit closer to the bone than VA-LCP<sup>3</sup>
- From SOMA database findings, additional degrees of metaphyseal rotation are added to reduce the potential for iatrogenic malalignment seen with other plate designs<sup>1,2</sup>
- Kickstand screws add additional medial column support by being more in line with medial column loading in comparison to direct lateral to medial screws
- Distal plate shape and posterior placement of the plate on the distal segment allow for independent lag screws to be placed initially for intercondylar fractures and reduce the interference of lag screws with the plate
- 8 metaphyseal screw holes provide versatile fixation options

### Technical specifications

- Standard plate lengths: 4-20 holes (160-441mm)
- Thickness: 5.0mm
- Left and right anatomic plate options
- **Drill bits:**
  - Ø3.2mm x 145mm (542050)
  - Ø3.2mm x 215mm (542051)
  - Ø4.3mm x 145mm (542052)
  - Ø4.3mm x 215mm (542053)

### Screw platform



### Evidence-based screw trajectories

- Converging and diverging screw trajectories in the metaphyseal region to increase fixation spread in the articular segment
- Staggered diaphyseal holes to accommodate screw placement around an intramedullary nail, hip prosthesis, or stemmed knee prosthesis
- The plate's anterior placement and screw cluster in the metaphysis are designed to avoid interference in the intercondylar notch and nominal trajectories, reducing or eliminating the need to use shorter screws in the most posterior distal screw hole
- Tip: To check the position of the locking screws in relation to the joint and the intercondylar notch, insert a K-wire into one of the distal locking screw holes utilizing a K-wire sleeve in conjunction with a drill sleeve

### References:

1. Lowe J, Alhandi A, Manoharan A, Ouellette E, Kaimrajh D, Milne E, Latta L. Axial and Rotational Malreduction (Golf Club Deformity) in Distal Femur Fractures. *J Orthop Trauma*. 2022 Oct 1;36(10):515-518. doi: 10.1097/BOT.0000000000002373. PMID: 35436242.
2. Campbell ST, Bosch LC, Swinford S, Amanatullah DE, Bishop JA, Gardner MJ. Distal Femur Locking Plates Fit Poorly Before and After Total Knee Arthroplasty. *J Orthop Trauma*. 2019 May;33(5):239-243. doi: 10.1097/BOT.0000000000001431. PMID: 30614915.
3. Internal Report № D0000262573, Rev AA, Selzach, Switzerland

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