

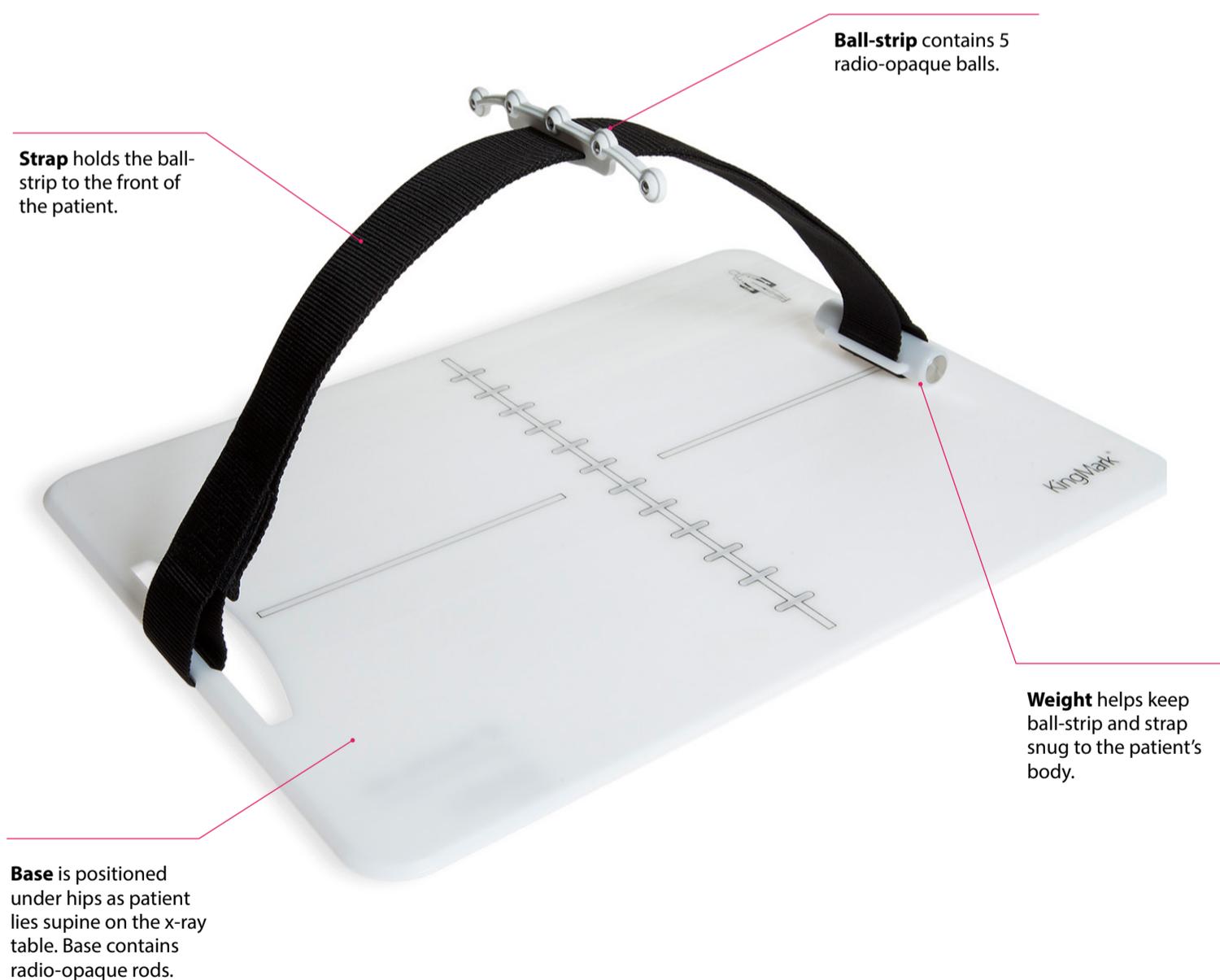
About KingMark

KingMark® allows surgeons to routinely and accurately calculate the radiological magnification of the hip using two separate radio-opaque markers. In clinical trials, KingMark performed four times more accurately than the conventional, single-ball marker because it's easier to position correctly and the technique is the same for all sizes of patients.

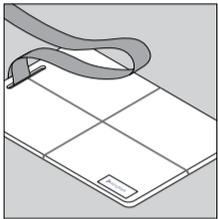
KingMark uses two markers — one behind the pelvis and the other in front, as the patient lies supine.

The anterior marker is a flexible strap that secures radio-opaque balls at regular intervals.

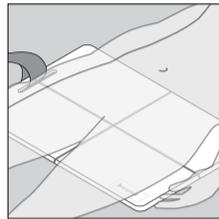
The posterior marker is a radiolucent pad with steel rods embedded in a vertical row.



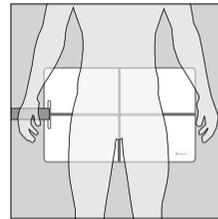
How to position KingMark for accurate calibration



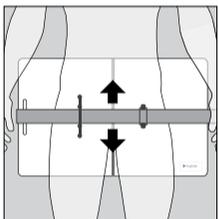
1 Place the KingMark base on the x-ray table, positioned for a hip x-ray. The gray cross-marks should be facing up.



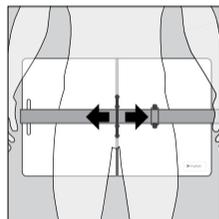
2 Lay patient supine on the KingMark base.



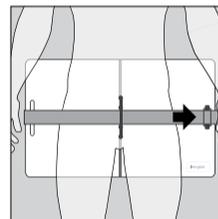
3 Move the base or patient so that the horizontal cross-mark is approximately in line with the tips of the greater trochanter and the vertical cross-mark is approximately midline to the patient.



4 Place the strap over the patient and position to cover the tips of the greater trochanter.



5 Slide the ball-strip along the strap so that it is positioned midline over the patient's subpubic region.



6 Use the weight to hold the strap and ball-strip snugly to the patient. Position the weight to the side of the patient, out of the x-ray image area.



7 You are ready to take the x-ray. The resulting radiograph should appear. One of the 5 balls should align with the femoral head of the hip and the rods should run midline through the pelvis. If the markers are very off center and not positioned between the hips, the x-ray should be repeated.

TIPS:

- The positioning technique remains the same for all sizes of patients. Since KingMark is positioned midline, it will always appear within the radiograph—even on very large patients.
- Flatten or remove bulky clothing that keeps the ball-strip from fitting snugly to the patient.
- Attempt to have each ball in the ball-strip touch the patient — or be as close as possible to the skin. However, do not pull the strap and ball-strip so tight that it significantly compresses the patient's skin or adipose tissue.