

## X-BOLT®

### EXPANDING BOLT OSTEOSYNTHESIS FOR THE PROXIMAL FEMUR

The X-BOLT® Nailing and Plating systems utilise the patented X-BOLT® for stronger hold and rotational stability, with reduced inventory and costs, allowing surgeons choice to treat all morphologies of proximal femoral fractures.

- Significantly stronger resistance to 'cut-out'
- Rotational stability with one centrally placed device
- Dynamic fracture compression without rotation
- Simple instrumentation, reversible & removable

### HOW IT WORKS

It's the patented design using threads of reversing directions on the X-BOLT® drive shaft that allows compression/distraction of the expandable limbs to deploy/reverse fixation.

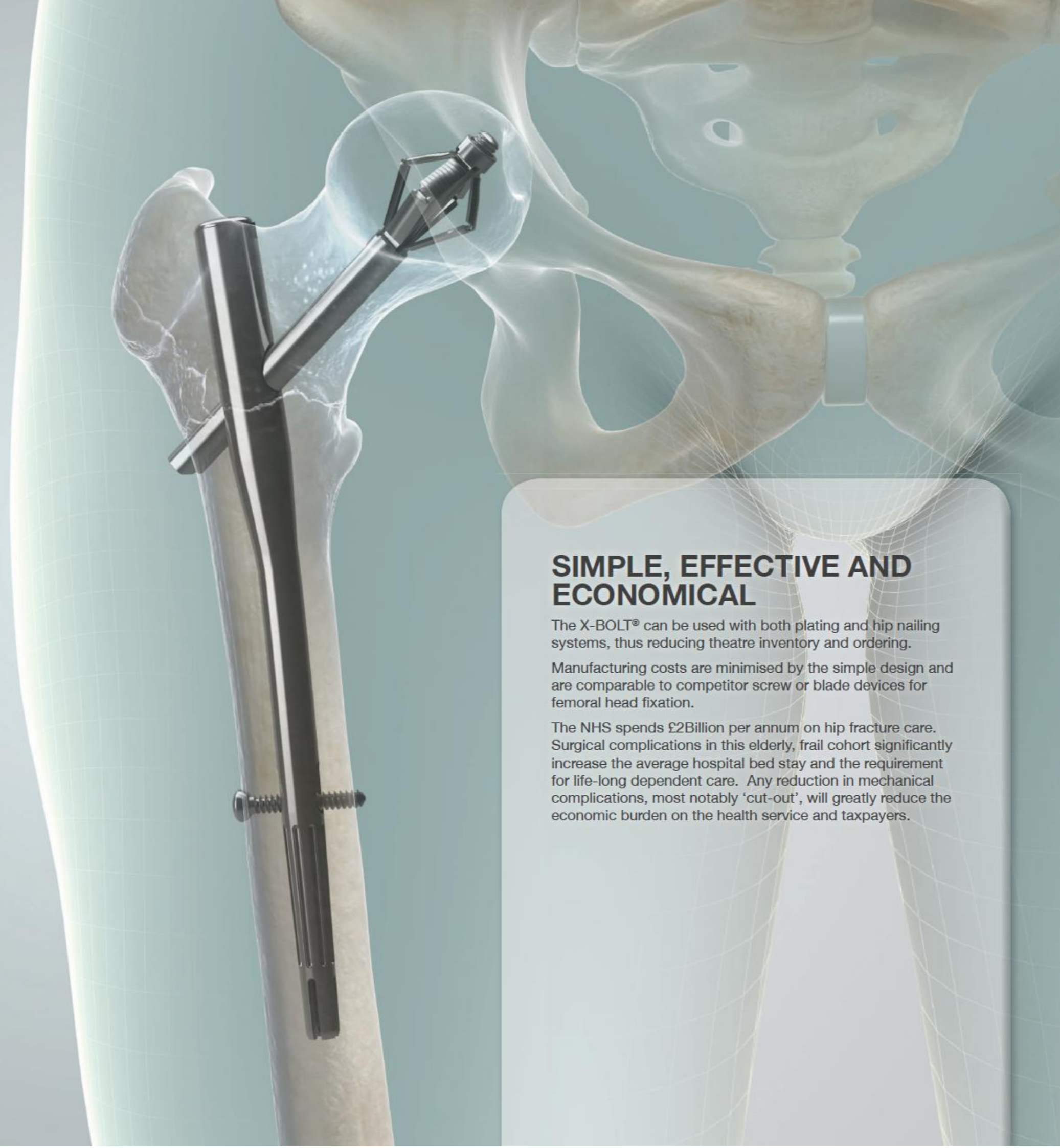
Clockwise screwdriver rotation expands and deploys the X-BOLT®. Anticlockwise rotation retracts the limbs to allow removal. Counter-rotation is prevented by the anti-rotation set screw or by the keyed plate barrel.

**NOTE: the X-BOLT® should be discarded and replaced if full expansion has been reversed.**

The four expandable limbs are always visible on standard AP & lateral fluoroscopy. The drive screw maintains a constant position at the vital tip-apex point throughout deployment. The elbow apex of each expanding limb expands perpendicular to the shaft, ensuring no disruptive forces are transmitted to the femoral head during the procedure.

### X-BOLT® NAILING FEATURES

- 14.5mm proximal nail diameter
- 4° valgus bend, 7.5° anteversion
- Stress modulation at distal tip
- Lateral wall preservation
- Preloaded anti-rotation set screw
- Patent pending, surgeon-friendly alignment jig

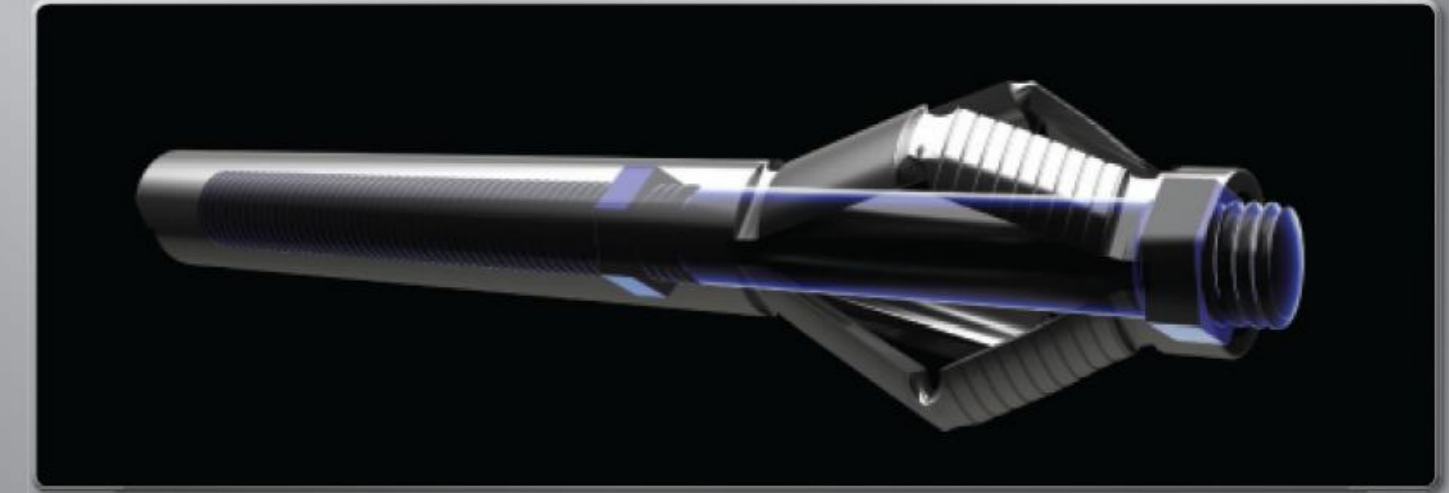


### SIMPLE, EFFECTIVE AND ECONOMICAL

The X-BOLT® can be used with both plating and hip nailing systems, thus reducing theatre inventory and ordering.

Manufacturing costs are minimised by the simple design and are comparable to competitor screw or blade devices for femoral head fixation.

The NHS spends £2Billion per annum on hip fracture care. Surgical complications in this elderly, frail cohort significantly increase the average hospital bed stay and the requirement for life-long dependent care. Any reduction in mechanical complications, most notably 'cut-out', will greatly reduce the economic burden on the health service and taxpayers.



### WHY IT HOLDS BETTER

The X-BOLT® has significantly better resistance to cut-out versus a standard hip lag screw due to:

- Widely-spaced points of fixation (24mm span when expanded)
- Compression of surrounding cancellous bone that increases local bone density
- Snowplough effect (longer load-displacement curve and energy absorbed)

Rotational stability is a major determinant of successful osteosynthesis. The X-BOLT® provides significantly better rotational resistance with a single guidewire shot into the femoral head.

The X-BOLT® anchors the femoral head fragment securely, whilst allowing controlled dynamic compression at the fracture site to ensure optimal fracture healing.

