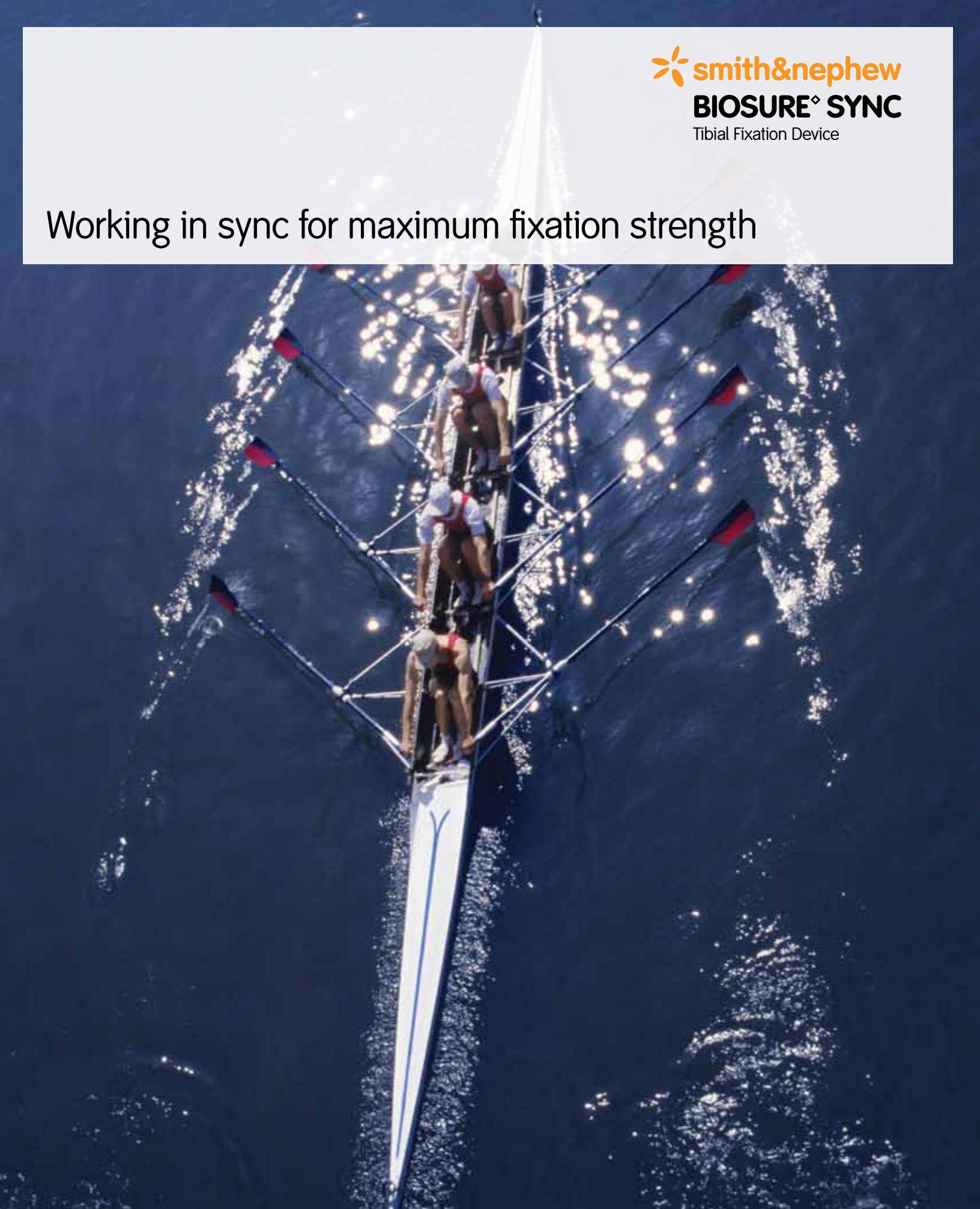
smith&nephew

BIOSURE◇ SYNC

Tibial Fixation Device

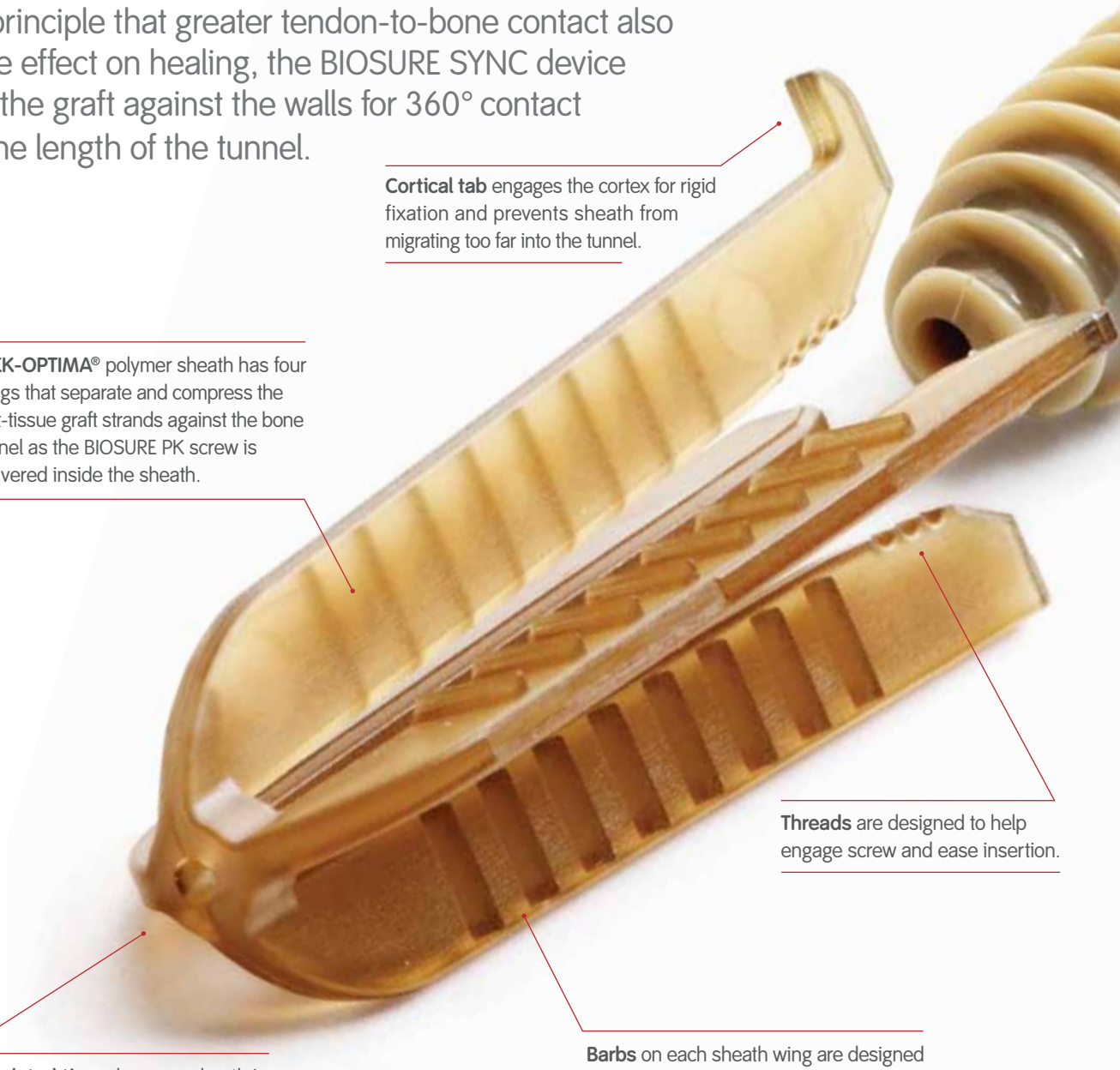
Working in sync for maximum fixation strength



The tibial fixation system that sets the standard for pullout strength.

The BIOSURE SYNC Tibial Fixation Device was designed to increase the graft fixation strength on the tibial side—an acknowledged weak link in ACL repair[1]—to provide a more rigid and robust ACL reconstruction. This revolutionary device employs an interference screw and outer sheath that work in synchrony to separate and hold up to four strands of tendon firmly in place inside the tibial tunnel.

Built on the principle that greater tendon-to-bone contact also has a positive effect on healing, the BIOSURE SYNC device compresses the graft against the walls for 360° contact throughout the length of the tunnel.



Cortical tab engages the cortex for rigid fixation and prevents sheath from migrating too far into the tunnel.

PEEK-OPTIMA® polymer sheath has four wings that separate and compress the soft-tissue graft strands against the bone tunnel as the BIOSURE PK screw is delivered inside the sheath.

Threads are designed to help engage screw and ease insertion.

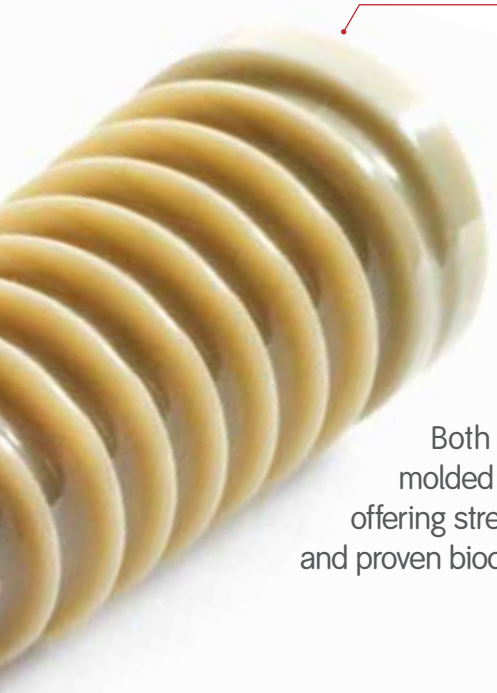
Cannulated tip makes sure sheath is inserted centrally into the tibial tunnel.

Barbs on each sheath wing are designed to help discourage graft slippage and prevent post-op graft laxity.

1. Brand JC Jr, Pienkowski D, Steenlage E, Hamilton D, Johnson DL, Caborn DNM. Interference Screw Fixation Strength of a Quadrupled Hamstring Tendon Graft is Directly Related to Bone Mineral Density and Insertion Torque. The American Journal of Sports Medicine 28[5], 705-710. 2000.

Accommodates both single- and double-bundle repairs as well as primary and revision surgeries.

BIOSURE PK Interference Screw is inserted into the sheath, inside the tibial tunnel.



Both components are molded from PEEK material offering strength, radiolucency and proven biocompatibility.

How the BIOSURE SYNC device increases pullout strength

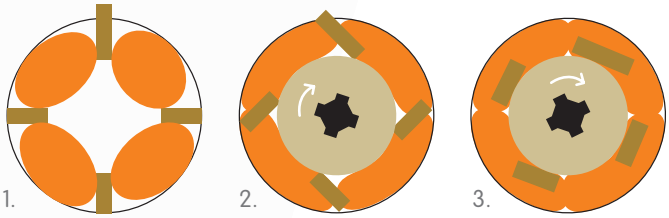


Figure 1. The BIOSURE SYNC sheath is inserted into the tibial tunnel, with graft strands between each of the four wings. The wings are perpendicular to the tunnel wall at this point.

Figure 2. As the BIOSURE PK Interference Screw is introduced into the sheath, the wings begin to twist, compressing the graft strands against the tunnel walls.

Figure 3. Once the screw is completely inserted, the wings are parallel to the tunnel walls, holding the graft strands in place. In addition, portions of the graft that "spill out" from behind the wings are held in place by the screw itself, allowing 360° tendon-to-bone contact.

Technique

Step 1. Separate and tension the distal strands of the graft parallel to the tibial tunnel, ensuring that the strands are not twisted or crossed within the tunnel.

Step 2. To separate and compress the grafts, introduce the appropriately-sized BIOSURE SYNC Dilator.

Step 3. Insert the BIOSURE SYNC device into the tibial tunnel, over a 1.2 mm x 18" guidewire.

Step 4. While maintaining tension on the graft strands, insert the BIOSURE SYNC device into the tunnel, between the strands, until the tab is flush with the superior aspect of the distal tibial tunnel.

Step 5. Remove the inserter; twist and release the J-lock feature to convert for use as a driver.

Step 6. While maintaining tension on the graft strands, insert the screw into the fixation device until it is flush with the tunnel.

Step 7. Remove driver and guidewire. Trim any excess graft.

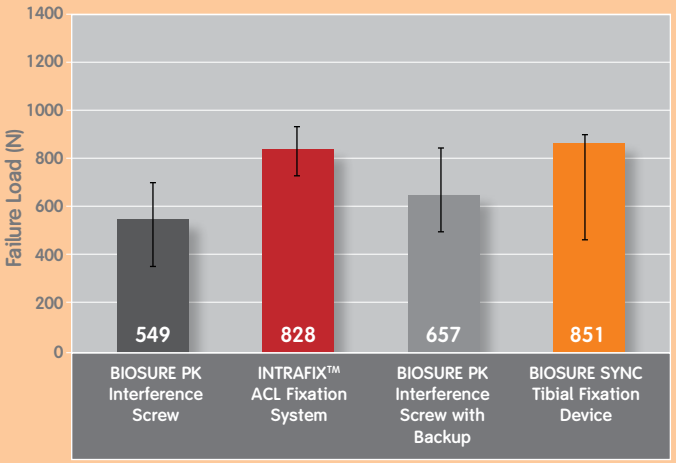
Tunnel Diameter (mm)	BIOSURE SYNC Device (mm)	Dilator Size (mm)	BIOSURE PK Screw (X mm x 25 mm)
5	5-6	5-6	6
6	5-6	5-6	6
7	7-8	7-8	7
8	7-8	7-8	8
9	9-10	9-10	9
10	9-10	9-10	10
11	11-12	11-12	11
12	11-12	11-12	11

One convenient system

The BIOSURE® SYNC Tibial Fixation Device also includes the **BIOSURE PK Interference Screw**; a **tensioner** designed to separate the graft strands while maintaining equal tension on all four grafts; **dilators** that helps to ease sheath insertion by separating the grafts and compressing them against the tunnel wall; and the **inserter,** which conveniently inserts both the sheath and the screw.

Rigid graft fixation

This biomechanical study demonstrated that ACL reconstructions using the BIOSURE SYNC device provided a superior initial fixation strength on the tibial side compared to standard fixation devices, including an interference screw with a fixation post backup, or an interference screw alone.*



N = Newtons, the amount of force required for an interference screw to pull out of bone.
*In a low bone-density test

For more information, contact your local Smith & Nephew representative, or visit **www.smith-nephew.com**.

Ordering Information

BIOSURE® SYNC Tibial Fixation Device

Reference #	Description
72202744	BIOSURE SYNC Device 5 mm - 6 mm
72202745	BIOSURE SYNC Device 7 mm - 8 mm
72202746	BIOSURE SYNC Device 9 mm - 10 mm
72202747	BIOSURE SYNC Device 11 mm - 12 mm
72202843	**BIOSURE SYNC Instrument System Includes 1 each of the following:**
72202752	BIOSURE SYNC Inserter
72202754	BIOSURE SYNC Tensioner
72202755	BIOSURE SYNC Dilator 5 mm - 6 mm
72202756	BIOSURE SYNC Dilator 7 mm - 8 mm
72202757	BIOSURE SYNC Dilator 9 mm - 10 mm
72202758	BIOSURE SYNC Dilator 11 mm -12 mm
72202753	BIOSURE SYNC Instrument Tray

BIOSURE SYNC Interference Screw

Reference #	Description
72202260	BIOSURE PK Screw 6 mm x 25 mm
72202263	BIOSURE PK Screw 7 mm x 25 mm
72202267	BIOSURE PK Screw 8 mm x 25 mm
72202272	BIOSURE PK Screw 9 mm x 25 mm
72202276	BIOSURE PK Screw 10 mm x 25 mm
72202279	BIOSURE PK Screw 11 mm x 25 mm
72201201	18" guidewire

Also available:

Reference #	Description
10600648A	Technique Guide
10600649A	Technique Animation DVD
10600662A	Technique Demonstration DVD

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