

Silicon Nitride Solutions for Foot & Ankle Correction

SiNAPTIC® Osteotomy Wedge System

Silicon nitride engineered to support reliable correction and confident fixation in foot and ankle osteotomy procedures.



Featuring: Cotton, Evans, and Subtalar Wedges



Why Silicon Nitride?

● Pro-Osteogenic

Unique surface chemistry mechanisms have demonstrated superior protein absorption and osteointegration when compared to traditional biomaterials.¹

● Bacteriostatic

Surface properties have been shown to actively repel and/or inhibit the growth of various types of bacteria in a laboratory and animal studies.^{2,3}

● Hydrophilic

Attracts fluids, further deterring bacteria colonization and enhancing bone-building mechanisms.⁴

● Enhanced Visibility on Imaging

Unlike metal implants, SiN allows for clear visualization of the surrounding tissues in X-rays and CT scans.⁵

● Strength and Durability

Material processing and characterization studies have demonstrated that silicon nitride exhibits high flexural strength, fracture toughness, and wear resistance suitable for load-bearing orthopedic applications.⁶

1. Lee SS, Huber S, Ferguson SJ. Comprehensive in vitro comparison of cellular and osteogenic response to alternative biomaterials for spinal implants. *Mater Sci Eng C*. 2021;127: 112251. doi:10.1016/j.msec.2021.112251

2. Gorth DJ, Puckett S, Ercan B, Webster TJ, Rahaman M, Bal BS. Decreased Bacteria Activity on Si3N4 Surfaces Compared with PEEK or Titanium. *Int J Nanomedicine*. 2012;7: 4829–4840. doi:10.2147/IJN.S35190

3. Webster TJ, Patel AA, Rahaman MN, Bal BS. Anti-infective and osteointegration properties of silicon nitride, poly(ether ether ketone), and titanium

4. Bock RM, McEntire BJ, Bal BS, Rahaman MN, Boffelli M, Pezzotti G. Surface modulation of silicon nitride ceramics for orthopaedic applications. *Acta Biomater*. 2015;26: 318–330. doi:10.1016/j.actbio.2015.08.014

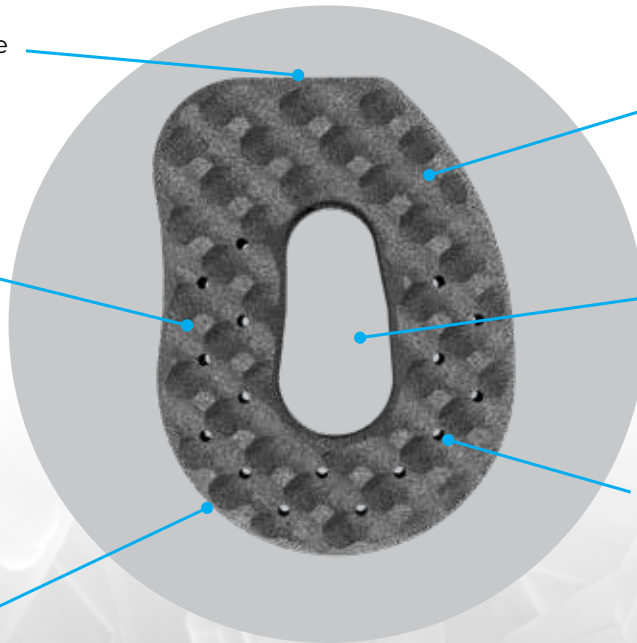
5. Taylor RM, Bernero J, Patel A, Brodke D, Khandkar A. SILICON NITRIDE: A NEW MATERIAL FOR SPINAL IMPLANTS. *Orthop Procs*. 2010;92-B(SUPP_1):133-133. doi:10.1302/0301-620X.92BSUPP_1.0920133

6. McEntire, BJ et al. (2016) Processing and Characterization of Silicon Nitride Bioceramics. *Bioceram Dev Appl* 6: 093

SiNAPTIC® Osteotomy Wedge System **Features**



Threaded hole for use with inserter



Optimized surface topography to prevent implant migration and allow for tighter fit

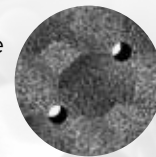
Manufactured using silicon nitride, a material shown to be:

- Pro-Osteogenic¹
- Bacteriostatic^{2,3}
- Hydrophilic⁴
- Supportive of clear visibility and artifact-free imaging⁵
- Strong and durable⁶

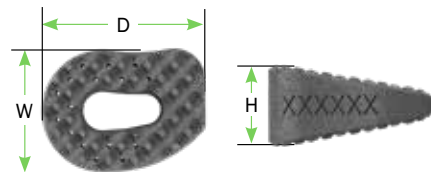
Central aperture for packing graft material

Anatomic shape designed to match bony anatomy

Precisely drilled axial pores to promote through-growth



SiNAPTIC® Osteotomy Wedge System **Components**



Cotton Wedge – Implants

PART #	DESCRIPTION	WIDTH	DEPTH	HEIGHT
S-111-121605	Cotton Wedge	12mm	16mm	5mm
S-111-121606				6mm
S-111-121607				7mm
S-111-121608				8mm
S-111-121610				10mm
S-111-121612				12mm
S-111-141805	Cotton Wedge	14mm	18mm	5mm
S-111-141806				6mm
S-111-141807				7mm
S-111-141808				8mm
S-111-141810				10mm
S-111-141812				12mm



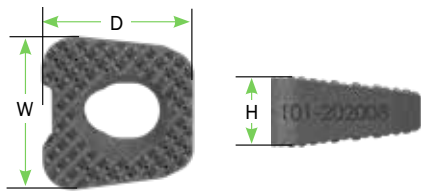
Cotton Wedge – Reusable Surgical Kit

PART #	DESCRIPTION
100-15-1000	Universal Reusable Tray Assembly
100-15-1000-1	Universal Reusable Tray, Base
100-15-1000-2	Universal Reusable Tray, Lid
115-15-1000	Cotton Reusable Surgical Caddy, Kit
115-15-1000-1	Cotton Reusable Surgical Caddy, Caddy
115-15-1000-2	Cotton Reusable Surgical Caddy, Lid



Cotton Wedge – Reusable Kit Components

PART #	DESCRIPTION	WIDTH	DEPTH	HEIGHT
113-25-121605	Cotton Trial	12mm	16mm	5mm
113-25-121606				6mm
113-25-121607				7mm
113-25-121608				8mm
113-25-121610				10mm
113-25-121612				12mm
113-25-141805	Cotton Trial	14mm	18mm	5mm
113-25-141806				6mm
113-25-141807				7mm
113-25-141808				8mm
113-25-141810				10mm
113-25-141812				12mm
103-15-1100				Inserter
103-15-1200	Tamp Tip			



Evans Wedge – Implants

PART #	DESCRIPTION	WIDTH	DEPTH	HEIGHT
S-101-181806	Evans Wedge	18mm	18mm	6mm
S-101-181808				8mm
S-101-181810				10mm
S-101-181812				12mm
S-101-202006	Evans Wedge	20mm	20mm	6mm
S-101-202008				8mm
S-101-202010				10mm
S-101-202012				12mm
S-101-222206	Evans Wedge	22mm	22mm	6mm
S-101-222208				8mm
S-101-222210				10mm
S-101-222212				12mm



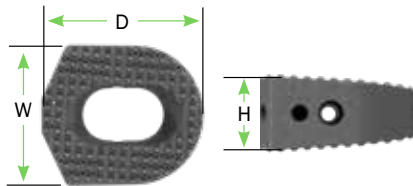
Evans Wedge – Reusable Surgical Kit

PART #	DESCRIPTION
100-15-1000	Universal Reusable Tray Assembly
100-15-1000-1	Universal Reusable Tray, Base
100-15-1000-2	Universal Reusable Tray, Lid
105-15-1000	Evans Reusable Surgical Caddy, Kit
105-15-1000-1	Evans Reusable Surgical Caddy, Base
105-15-1000-2	Evans Reusable Surgical Caddy, Lid



Evans Wedge – Reusable Kit Components

PART #	DESCRIPTION	WIDTH	DEPTH	HEIGHT
103-25-181806	Evans Trial	18mm	18mm	6mm
103-25-181808				8mm
103-25-181810				10mm
103-25-181812				12mm
103-25-202006	Evans Trial	20mm	20mm	6mm
103-25-202008				8mm
103-25-202010				10mm
103-25-202012				12mm
103-25-222206	Evans Trial	22mm	22mm	6mm
103-25-222208				8mm
103-25-222210				10mm
103-25-222212				12mm
103-15-1100	Inserter			
103-15-1200	Tamp Tip			



Subtalar Wedge – Implants

PART #	DESCRIPTION	WIDTH	DEPTH	HEIGHT
S-121-192508-0	Subtalar Wedge – 0°	19mm	25mm	8mm
S-121-192510-0				10mm
S-121-192512-0				12mm
S-121-192514-0				14mm
S-121-192516-0				16mm
S-121-232708-0	Subtalar Wedge – 0°	23mm	27mm	8mm
S-121-232710-0				10mm
S-121-232712-0				12mm
S-121-232714-0				14mm
S-121-232716-0				16mm
S-121-192508-10	Subtalar Wedge – 10°	19mm	25mm	8mm
S-121-192510-10				10mm
S-121-192512-10				12mm
S-121-192514-10				14mm
S-121-192516-10				16mm
S-121-232708-10	Subtalar Wedge – 10°	23mm	27mm	8mm
S-121-232710-10				10mm
S-121-232712-10				12mm
S-121-232714-10				14mm
S-121-232716-10				16mm



Subtalar Wedge – Reusable Surgical Kit

PART #	DESCRIPTION
100-15-1000	Universal Reusable Tray Assembly
100-15-1000-1	Universal Reusable Tray, Base
100-15-1000-2	Universal Reusable Tray, Lid
125-15-1000	Subtalar – 0° Reusable Surgical Caddy, Kit
125-15-1000-1	Subtalar – 0° Reusable Surgical Caddy, Base
125-15-1000-2	Subtalar – 0° Reusable Surgical Caddy, Lid
125-15-1010	Subtalar – 10° Reusable Surgical Caddy, Kit
125-15-1010-1	Subtalar – 10° Reusable Surgical Caddy, Base
125-15-1010-2	Subtalar – 10° Reusable Surgical Caddy, Lid



Subtalar Wedge – Reusable Kit Components

PART #	DESCRIPTION	WIDTH	DEPTH	HEIGHT
123-25-192508-0	Subtalar Trial – 0°	19mm	25mm	8mm
123-25-192510-0				10mm
123-25-192512-0				12mm
123-25-192514-0				14mm
123-25-192516-0				16mm
123-25-232708-0	Subtalar Trial – 0°	23mm	27mm	8mm
123-25-232710-0				10mm
123-25-232712-0				12mm
123-25-232714-0				14mm
123-25-232716-0				16mm
123-25-192508-10	Subtalar Trial – 10°	19mm	25mm	8mm
123-25-192510-10				10mm
123-25-192512-10				12mm
123-25-192514-10				14mm
123-25-192516-10				16mm
123-25-232708-10	Subtalar Trial – 10°	23mm	27mm	8mm
123-25-232710-10				10mm
123-25-232712-10				12mm
123-25-232714-10				14mm
123-25-232716-10				16mm
123-15-1100	Subtalar Inserter			
103-15-1200	Tamp Tip			



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