

United States District Court,  
E.D. Pennsylvania.

**SYNTHES (U.S.A),**  
Plaintiff.

v.

**HOWMEDICA OSTEONICS CORPORATION (d/b/a Stryker Orthopaedics,**  
Defendant.

**March 24, 2008.**

Eric Kraeutler, John V. Gorman, Peter M. Smith, Morgan Lewis & Bockius LLP, Philadelphia, PA, Jeffrey M. Olson, Matthew S. Jorgenson, Paul H. Meier, Sidley Austin LLP, Los Angeles, CA, for Plaintiff.

Kevin M. Kocun, Lerner, David, Littenberg, Krumholz & Mentik, LLP, Westfield, NJ, for Defendant.

### ***ORDER ON CLAIM CONSTRUCTION***

**ANITA B. BRODY, District Judge.**

#### **I. INTRODUCTION**

In this patent infringement action, Plaintiff Synthes (U.S.A.) ("Synthes") brings suit against Defendant Howmedica Osteonics Corporation ("Howmedica") for alleged infringement of U.S. Patent No. 5,976,141 ("the '141 patent"). The '141 patent is entitled "Threaded Insert for Bone Plate Screw Hole" and involves orthopedic devices used in the fixation of broken bones. Currently before me is the question of the proper construction of certain claims of the '141 patent pursuant to *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). This Court held a *Markman* hearing on February 26, 2008.

#### **II. LEGAL STANDARD**

Patent infringement analysis involves two steps: (1) determining the meaning and scope of the patent claims asserted to be infringed, and (2) comparing the properly construed claims to the device accused of infringing. *Vivid Tech., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed.Cir.1999). It is the first step, known as claim construction, that is at issue here. "Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement." *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed.Cir.1997). Claim construction is a matter of law to be determined by the court. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed.Cir.1996).

"Claim interpretation begins with an examination of the intrinsic evidence, i.e., the claims, the rest of the specification and, if in evidence, the prosecution history." *CCSFitness, Inc. v. Brunswick Corp.*, 288 F.3d

1359, 1366 (Fed.Cir.2002). It is a "bedrock principle" of patent law that "the claims of a patent define the invention to which the patentee is entitled the right to exclude." FN1 Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed.Cir.2005) (citations omitted). Thus, "claim construction analysis must begin and remain centered on the claim language itself." Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1116 (Fed.Cir.2004).

FN1. The two main elements of a patent document are the claims and the specification, Markman, 517 U.S. at 373, the required contents of which are set forth in 35 U.S.C. s. 112: "The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." *Id.*

When a court construes a claim, the terms of a claim "are generally given their ordinary and customary meaning," that is, "the meaning that the term would have to a person of ordinary skill in the art ... as of the effective filing date of the patent application." FN2 Phillips, 415 F.3d at 1312-13 (citations omitted). "In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Id.* at 1314. However, in many cases, "determining the ordinary and customary meaning of the claim requires examination of terms that have a particular meaning in a field of art." *Id.*

FN2. "Although words in a claim are generally given their ordinary and customary meaning, a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history." Vitronics, 90 F.3d at 1582.

The claims themselves provide a considerable amount of guidance as to the construction of each claim term. *Id.* "The context in which a term is used in the asserted claim can be highly instructive." *Id.* Other claims in the patent can provide valuable insight into the construction of a claim. *Id.* "Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims." *Id.* Additionally, differences between claims can be very important to the meaning of a claim term. *Id.* "For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Id.* at 1314-15.

While the claims themselves are important, they must be examined in conjunction with the specification. *Id.* at 1315. "The specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of the disputed term." *Id.* (quoting Vitronics, 90 F.3d at 1582). The specification may provide a special definition of a claim term or it "may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor." *Id.* at 1316. "[A]lthough the specification often describes very specific embodiments of the invention, [federal courts] have repeatedly warned against confining the claims to those embodiments." *Id.* at 1323. The Federal Circuit has "expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as

being limited to that embodiment." *Id.*

In addition to examining the specification, the prosecution history, if provided, should be considered. *Id.* at 1317. "The prosecution history ... consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent." *Id.* The prosecution history may provide further explanation of the patent and explain how the PTO and inventor understood the patent. *Id.* "Yet because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id.*

Lastly, extrinsic evidence "may also be considered, *if needed* to assist in determining the meaning or scope of technical terms in the claims," *Vitronics*, 90 F.3d at 1583 (citations omitted, emphasis in original). Extrinsic evidence "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises," *Phillips*, 415 F.3d at 1317, However, where the intrinsic evidence is sufficient to resolve any ambiguity in the claim terms at issue, "it is improper to rely on extrinsic evidence." *Vitronics*, 90 F.3d at 1583.

### III. DISCUSSION

In claim construction analysis, "only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy." *Vivid Tech.*, 200 F.3d at 803 (Fed.Cir.1999). Here, the parties dispute the proper construction of eight claim phrases. For purposes of organization, I will examine these phrases in the following six discussion sections.

#### ***A. Disputed Claim Phrase 1- "an upwardly facing surface for engaging a bone screw head"***

Synthes argues that this phrase should be defined to mean: *An upwardly facing surface on the insert for contact with a bone screw.* Howmedica argues that this phrase should be defined to mean: *An upwardly facing surface constructed in a manner to interlock with a particular bone screw head with which it is intended to be used, i.e., more than merely touching or contacting.*

Synthes argues that neither intrinsic nor extrinsic evidence supports Howmedica's contention that this Court should narrowly interpret the term "engaging" to mean "interlocking." Synthes relies on intrinsic evidence to establish that the term "engaging" means "contacting" or "receiving." Relying on the principle that "claim terms are normally used consistently throughout the patent," *Phillips*, 415 F.3d at 1314, Synthes points to claim 25 of the patent that refers to a lower section of the insert "for engaging said plate in said hole below its smaller dimension," which is described in the specification (col. 6:7-8 and Figs. 3-4) in terms of projections that simply "contact" the undercut chamfer.FN3 Additionally in claim 25, the same is true of the "engaging" upper section of the insert, which is described in the specification (col.6:1-11) in terms of a locking shoulder 32 that "contacts" the plate countersunk surface.

FN3. The undercut chamfer is the lower beveled surface of the bone plate hole.

Synthes finds further support for its construction of the term "engaging" in the specification at column 4:57-59 where it explains that the insert has "a countersunk surface 12 for *contact* with the underside of a bone screw head" and at column 2:52-56 where it explains that "[t]he upper section of the insert has ... a countersunk surface for *receiving* the head of the bone screw." (emphasis added). Additionally, Synthes

points out that specification supports a broad interpretation of the term "engage" because where Synthes intended to narrow the interpretation of term it added the descriptive adverbs seen in column 6:32-36 such as "forcibly engage" and "forcible thread engagement." Lastly, Synthes points out that the word "interlock" never appears in the claims, specification, or prosecution history of the '141 patent.

In contrast, Howmedica argues that the word "engaging" should be interpreted to mean "interlocking" because it is the only construction of the term that would be faithful to the specification and drawings. Although the preferred embodiment described in the specification and illustrated in the figures might require a narrow interpretation of the term "engaging," the Federal Circuit has "expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment." *Phillips*, 415 F.3d at 1323. As explained in *Phillips*, the purpose of a specification is to provide a "best mode" to "teach and enable those of skill in the art to make and use the invention." *Id.* There is no support in the '141 patent for Howmedica's contention that the preferred embodiment is the only embodiment. Hence, interpreting the term "engaging" to mean "contacting" is not in conflict with the invention.

To further support its position, Howmedica points out that the term "contacting" appears in the same claim that uses the term "engaging" and argues that based on the doctrine of claim differentiation these terms should be interpreted differently. According to the doctrine of claim differentiation, "[t]here is presumed to be a difference in meaning and scope when different words or phrases are used in separate claims. To the extent that the absence of such difference in meaning and scope would make a claim superfluous." *Tandon Corp. v. U.S. Int'l Trade Comm'n*, 831 F.2d 1017, 1023 (Fed.Cir.1987). In this case, the presumption does not apply because "contacting" and "engaging" appear in different structural sections of the same claim and no claim is rendered superfluous if these terms have the same meaning.

Lastly, Howmedica supports its position with extrinsic evidence, such as dictionary definitions of the term "engage" and expert testimony. However, where the intrinsic evidence is sufficient to resolve any ambiguity in the claim term at issue, "it is improper to rely on extrinsic evidence." *Vitronics*, 90 F.3d at 1583. I find that the intrinsic evidence unambiguously supports Synthes' claim interpretation. Therefore, Disputed Claim Phrase 1 means: An upwardly facing surface on the insert for contact with a bone screw.

***B. Disputed Claim Phrases 2 and 4-* "a downward facing locking surface for contacting a top edge of the bone plate" and "a downwardly facing locking surface for contacting the upward facing countersunk surface of said bone plate hole"**

Synthes argues that Disputed Claim Phrase 2 should be defined to mean: *A downward facing surface on the insert that contacts a top edge of the bone plate hole to retain the insert in the hole*; and Disputed Claim Phrase 4 should be defined to mean: *A downwardly facing surface on the insert that contacts the upwardfacing countersunk surface of the bone plate hole to retain the insert in the hole*. Howmedica argues that Disputed Claim Phrase 2 should be defined to mean: *A downwardly facing surface constructed in a manner to be fastened or fixed to the angled upper surface of the bone plate hole*; and Disputed Claim Phrase 4 should be defined to mean: *A downwardly facing surface constructed in a manner to be fastened or fixed to the upwardfacing countersunk surface of the bone plate hole*.

Synthes contends that the plain language of the disputed phrases contradicts Howmedica's interpretation of them. As highlighted by Synthes, both phrases state that the downward facing locking surface of the insert is "for contacting" the upper edge or surface of the bone plate hole. They do not require or even suggest that

the insert be "fastened" or "fixed" to the bone plate hole. Additionally, Synthes points to the preferred embodiment of the '141 patent to support its view that the downwardly facing locking surface requires nothing more than "contact" with the plate hole. According to Synthes, the patent recites that it is the conjoint presence of the locking shoulder 32 at the top of the insert and the projections 22 at the lower portion of the insert that act to retain the insert in the bone plate hole: "the locking shoulder 32 *contacts* the plate countersunk surface 102. *The insert 1 is thereby retained in the plate hole 101 by the projections 22 and the locking shoulder 32.*" Column 6:10-13 (emphasis added).

Howmedica argues that the disputed term in both claim phrases is "locking" and that Synthes' definition of these phrases ignores that term, which is contrary to the principle that all terms recited in the claim should be considered. However, Synthes' interpretation of the disputed claims does not remove "locking" from these definitions because the "locking" of the insert into the bone plate hole occurs from the combined contact of the locking shoulder 32 and the projections 22 with the bone plate hole. Although Howmedica asserts that the terms "fastened" and "fixed" provide the appropriate definition of the term "locking," the preferred embodiment of the patent demonstrates that the insert is never "fastened" or "fixed" to the bone plate hole. Thus, the addition of these terms improperly narrows the construction of these claims.

I find that the intrinsic evidence supports Synthes' claim construction. Therefore, Disputed Claim Phrase 2 means: A downward facing surface on the insert that contacts a top edge of the bone plate hole to retain the insert in the hole; and Disputed Claim Phrase 4 means: A downwardly facing surface on the insert that contacts the upward facing countersunk surface of the bone plate hole to retain the insert in the hole.

### ***C. Disputed Claim Phrase 3- "a locking surface for clamping over said countersunk surface and a projection for engagement with said undercut chamfer"***

Synthes argues that Disputed Claim Phrase 3 contains two separate portions: (A) "a locking surface for clamping over said countersunk surface," which it asserts should be defined to mean: *A surface on the insert for clamping over the countersunk surface of a bone plate hole to retain the insert in the hole;* and (B) "a projection for engagement with said undercut chamfer," which it asserts should be defined to mean: *A projecting portion of the insert for contacting the undercut chamfer of the bone plate hole.* Howmedica argues that Disputed Claim Phrase 3 should be defined to mean: *A surface constructed in a manner to be fastened or fixed over the countersunk surface of the bone plate hole such that a clamping force is provided thereto and a protuberance or extension constructed in a manner to simultaneously contact with the undercut chamfer of the plate hole such that motion may be transferred thereto.*

Synthes contends that the language of the claim supports its interpretation of the phrase. Synthes points to Figure 4 of the specification to demonstrate that Howmedica has improperly introduced into the construction of this claim the ideas of "clamping force," "simultaneous contact," and "motion ... transferred." According to the description of Figure 4 in the specification, "the locking shoulder 32 contacts the plate countersunk surface 102. *The insert 1 is thereby retained in the plate hole 101 by the projections 22 and locking shoulder.*" Col. 6:10-13 (emphasis added). It is apparent from this description of Figure 4 that the insert does not require force to hold it in place. Additionally, for the same reasons as stated in Disputed Claim Phrase 1, Synthes contends that the term "engagement" should be interpreted to mean "contact."

Howmedica argues that a definition of this claim that is faithful to the invention described in the '141 patent requires the terms "clamping force," "simultaneous contact," and "motion ... transferred." Howmedica asserts that these terms are necessary to explain the force that the expandable sectors, depicted in the preferred

embodiment, exert when the bone screw is fully inserted. Howmedica contends that it is this force that creates the clamping and causes the transfer of motion.

Although the preferred embodiment that has expandable sectors may cause the insert to exert force on the bone plate hole, other embodiments of the invention may not require any force. As previously discussed, there is no evidence that the preferred embodiment of the '141 patent is the only embodiment. The language in dispute only appears in independent Claim 16; the fact that dependent Claim 17 concerns "a plurality of expandable sectors" is further evidence that not every embodiment of the invention requires expandable sectors. This is because "the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." Phillips, 415 F.3d at 1314-15.

For the same reasons as discussed in relation to Disputed Claim 1, I find that the term "engagement" is synonymous with the term "contact." Additionally, I interpret "engagement" to mean "contact" based on the principle of claim construction that "terms are normally used consistently throughout the patent." *Id.* at 1314.

I find that the intrinsic evidence supports Synthes' claim construction. Therefore, portion (A) of Disputed Claim Phrase 3 means: A surface on the insert for clamping over the countersunk surface of a bone plate hole to retain the insert in the hole. Additionally, portion (B) of Disputed Claim Phrase 3 means: A projecting portion of the insert for contacting the undercut chamfer of the bone plate hole.

***D. Disputed Claim Phrase 5-"an upper section engaging said plate in said hole above its smaller dimension"***

Synthes argues that Disputed Claim Phrase 5 should be defined to mean: *The upper section of the insert has a portion that contacts the bone plate in the bone plate hole above its smaller dimension.* Howmedica argues that Disputed Claim Phrase 5 should be defined to mean: *An upper section of the insert constructed in a manner to interlock (i.e., more than merely touching or contacting) with the bone plate hole above its smaller dimension.*

The only dispute in interpretation between Synthes and Howmedica regarding this phrase is the meaning of the term "engaging." For the same reasons as discussed in relation to Disputed Claim 1, I find that the term "engaging" is synonymous with the term "contacting." Additionally, I interpret "engaging" to mean "contacting" based on the principle of claim construction that "terms are normally used consistently throughout the patent." *Id.* at 1314.

I find that the intrinsic evidence supports Synthes' claim construction. Therefore, Disputed Claim Phrase 5 means: The upper section of the insert has a portion that contacts the bone plate in the bone plate hole above its smaller dimension.

***D. Disputed Claim Phrase 6-"a lower section capable of passing through said smaller diameter section of said plate hole and engaging said plate in said hole below its smaller dimension"***

Synthes argues that Disputed Claim Phrase 6 should be defined to mean: *The lower section of the insert is capable of passing through the smaller diameter section of a bone plate hole, and contacting the bone plate in the hole below its smaller diameter section.* Howmedica argues that Disputed Claim Phrase 6 should be defined to mean: *A lower section of the insert constructed in a manner to be capable of passing through the*

*smaller diameter of the bone plate hole and interlocking (i.e., more than merely touching or contacting) with the bone plate hole below its smaller dimension.*

The only dispute in interpretation between Synthes and Howmedica regarding this phrase is the meaning of the term "engaging." For the same reasons as discussed in relation to Disputed Claim 1, I find that the term "engaging" is synonymous with the term "contacting." Additionally, I interpret "engaging" to mean "contacting" based on the principle of claim construction that "terms are normally used consistently throughout the patent." *Id.* at 1314.

I find that the intrinsic evidence supports Synthes' claim construction. Therefore, Disputed Claim Phrase 6 means: The lower section of the insert is capable of passing through the smaller diameter section of a bone plate hole, and contacting the bone plate in the hole below its smaller diameter section.

***F. Disputed Claim Phrases 7 and 8-*** "a threaded bone screw passing through said central hole, engaging the threaded portion of said central hole and pressing said insert against said plate above the smaller diameter section in said plate hole" and "for engaging a threaded bone screw passing through said central hole and pressing said insert against said plate above the smaller diameter section in said plate hole"

Synthes argues that Disputed Claim Phrase 7 should be defined to mean: *The bone screw is adapted to be screwed into the insert, such that the threads of the insert receive the threads of the bone screw, and the insert is pressed against the bone plate above the smaller diameter section in the bone plate hole;* and Disputed Claim Phrase 8 should be defined to mean: *The central hole of the insert is threaded so as to receive a threaded bone screw, and press the insert against the bone plate above the smaller diameter section in the bone plate hole.* Howmedica argues that both Disputed Claim Phrase 7 and Disputed Claim Phrase 8 should be defined to mean: *An insert that is constructed such that, when a threaded bone screw is passed through the central hole of the insert so that it interlocks (i.e., more than merely touching or contacting) with the threaded portion of the hole, the insert exerts a force or pressure on the bone plate above the smaller diameter section of the plate hole.*

Synthes and Howmedica dispute the interpretation of two terms in these claims "engaging" and "pressing ... against." Synthes argues that the term "engaging" does not need to be construed because it is common knowledge that a screw "engages" a threaded hole. However, because Howmedica requests a claim construction of this phrase, Synthes asserts that in the specific context of the relationship of hole threads "engaging" screw threads, the term "engaging" should be interpreted to mean "receiving." Synthes acknowledges that when the term "engage" appears in other claims, it construes the term to mean "contact," but it argues that in the case of a screw in a threaded hole, the specific context requires "engage" to mean "receive."

Howmedica asserts that the differences in Synthes' interpretation of the term "engage" based on context highlights an inconsistency in Synthes' construction of the term. Howmedica is correct that "terms are normally used consistently throughout the patent," Phillips, 415 F.3d at 1314. However, defining the term "engage" to mean "contact" or "receive" depending on the context in which the term appears is not inconsistent, especially based on the Federal Circuit's view that "[t]he context in which a term is used in the asserted claim can be highly instructive." *Id.* Howmedica argues that "engage" should be defined to mean "interlock;" however, its interpretation of the term "engage" is inconsistent with the '141 patent as discussed previously in regard to Disputed Claim Phrase 1.

The other disputed term in these claims is "pressing ... against." Synthes argues that "pressing ... against" requires no interpretation because it is completely understandable. In contrast, Howmedica contends that "pressing" means to "exert[ ] a force or pressure." Howmedica argues that due to the expandable sectors, described in the preferred embodiment of the invention, the only interpretation of "pressing" that is faithful to the invention requires "force or pressure." This is because once a screw is fully inserted into an insert with expandable sectors the sectors are designed to exert force on the bone plate hole in order to lock the insert in place. Although the preferred embodiment of the invention may place "force or pressure" on the bone plate, as discussed previously, there is no evidence that this is the only embodiment of the invention. Additionally, there is no reason to believe that other embodiments of the invention require "force or pressure."

I find that the intrinsic evidence supports Synthes' claim construction. Therefore, Disputed Claim Phrase 7 means: The bone screw is adapted to be screwed into the insert, such that the threads of the insert receive the threads of the bone screw, and the insert is pressed against the bone plate above the smaller diameter section in the bone plate hole. Additionally, Disputed Claim Phrase 8 means: The central hole of the insert is threaded so as to receive a threaded bone screw, and press the insert against the bone plate above the smaller diameter section in the bone plate hole.

### ***ORDER***

**AND NOW**, this \_\_\_\_\_ day of \_\_\_\_\_, 2008, it is **ORDERED** that the Court construes the disputed claim terms in U.S. Patent No. 5,976,141 ("the '141 patent") as follows:

- (1) Disputed Claim Phrase 1 ("an upwardly facing surface for engaging a bone screw head") means: An upwardly facing surface on the insert for contact with a bone screw head; and
- (2) Disputed Claim Phrase 2 ("a downward facing locking surface for contacting a top edge of the bone plate hole") means: A downward facing surface on the insert that contacts a top edge of the bone plate hole to retain the insert in the hole; and
- (3) Disputed Claim Phrase 3(A) ("a locking surface for clamping over said countersunk surface") means: A surface on the insert for clamping over the countersunk surface of a bone plate hole to retain the insert in the hole; and
- (4) Disputed Claim Phrase 3(B) ("a projection for engagement with said undercut chamfer") means: A projecting portion of the insert for contacting the undercut chamfer of the bone plate hole; and
- (5) Disputed Claim Phrase 4 ("a downwardly facing locking surface for contacting the upward facing countersunk surface of said bone plate hole") means: A downwardly facing surface on the insert that contacts the upward facing countersunk surface of the bone plate hole to retain the insert in the hole; and
- (6) Disputed Claim Phrase 5 ("an upper section engaging said plate in said hole above its smaller dimension") means: The upper section of the insert has a portion that contacts the bone plate in the bone plate hole above its smaller dimension; and
- (7) Disputed Claim Phrase 6 ("a lower section capable of passing through said smaller diameter section of



said plate hole and engaging said plate in said hole below its smaller dimension") means: The lower section of the insert is capable of passing through the smaller diameter section of a bone plate hole, and contacting the bone plate in the hole below its smaller diameter section; and

(8) Disputed Claim Phrase 7 ("a threaded bone screw passing through said central hole, engaging the threaded portion of said central hole and pressing said insert against said plate above the smaller diameter section in said plate hole") means: The bone screw is adapted to be screwed into the insert, such that the threads of the insert receive the threads of the bone screw, and the insert is pressed against the bone plate above the smaller diameter section in the bone plate hole; and

(9) Disputed Claim Phrase 8 ("for engaging a threaded bone screw passing through said central hole and pressing said insert against said plate above the smaller diameter section in said plate") means: The central hole of the insert is threaded so as to receive a threaded bone screw, and press the insert against the bone plate above the smaller diameter section in the bone plate hole.

E.D.Pa.,2008.

Synthes (U.S.A) v. Howmedica Osteonics Corp.

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