

HOHMANN & BARNARD, INC.
a MiTek company

Concrete Inserts Sharktooth Insert

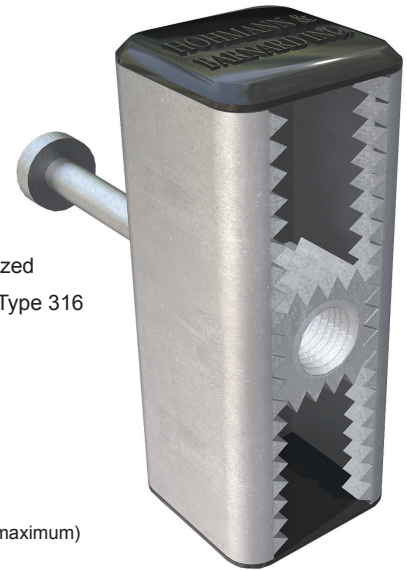
Hohmann & Barnard SHARKTOOTH INSERT has various applications and is capable of developing working loads up to 8,000#/ft. in both shear and tension. It is adjustable along virtually its entire length, and also allows in and out adjustment, while still resisting shear and tension loads.

The insert is available in hot-dipped galvanized carbon steel or stainless steel type 316. It is fabricated in lengths from 3" to 12'-0" long, and can be custom designed for project-specific applications, such as radiuses or specific lengths. The SHARKTOOTH Insert is a labor-saving, pre-engineered, high-strength insert.

- Serrated shark-tooth design allows insert to resist high vertical shear load (eliminates potential for vertical slip due to inadequate bolt torque, as with wedge style inserts).
- Allows for substantial vertical adjustment along full length of insert.
- Rebar interference not an issue (unlike post-installed expansion bolts)
- Additional rebar hairpins not required to develop published working loads.
- Welded connections not required! Nut or bolt connection into insert allows for easy installation and adjustment.
- Bolting hardware is U.S. standard thread (metric thread can be difficult to source).
- Custom design available for special load requirements
- Short lead-times & competitive pricing
- H&B's 75 years of experience in the concrete, masonry and stone industry.

U.S. Patent No. D724769

DRAWINGS FOR ILLUSTRATIVE PURPOSES ONLY



Finish:

- Hot-Dip Galvanized
- Stainless Steel Type 316

Insert Length:

- 3"
- 4"
- CUSTOM

(3" minimum, 12' maximum)

Note: H&B recommends Stainless Steel for maximum protection against corrosion.

WORKING LOADS: Single Point Loading

Part #	Insert Length	Spacing Between Studs	Allowable Loads		Ultimate Loads	
			Tension 5300#	Shear 5185#	Tension 10,600#	Shear 10,370#
ST-3	3"	n/a	Tension 5300#	Shear 5185#	Tension 10,600#	Shear 10,370#
ST-4	4"	n/a	Tension 5300#	Shear 5185#	Tension 10,600#	Shear 10,370#

- Concrete strength = 4,000 p.s.i.
- No additional reinforcement in the concrete has been assumed in the analysis of the sharktooth inserts.
- Headed welded studs utilize a design factor of 2:1, as per manufacturer's recommendations.
- Insert #ST-3 and #ST-4 allowable shear loads and tension loads are controlled by headed stud strengths.

- Allowable loads shown are applicable along the entire length of insert, no minimum distance required.
- Combined loading evaluation using;

$$\left(\frac{T \text{ actual}}{T \text{ allowable}} \right)^{5/3} + \left(\frac{V \text{ actual}}{V \text{ allowable}} \right)^{5/3} \leq 1.0$$

- * or as required by code
- Recommended torque value for a 3/4" Ø A325 machine bolt and the 3/4" Ø sharktooth nut is 85-90 ft./lbs.

- Minimum edge distance to centerline of headed stud = 3-1/4" (vertical installation)
- Minimum concrete required above or below centerline of headed studs, when mounted vertically or horizontally = 3-1/4"
- Higher allowable loads can be achieved for the #ST-3 or #ST-4 insert by increasing headed stud diameter.
- Shear controlled by flange bending.

MATERIAL CONFORMANCES:

	CARBON STEEL	STAINLESS STEEL
Insert Body	ASTM A500/A500M	ASTM A554
Headed Studs	ASTM A108	ASTM A276
	Fty: 46,000 psi Fpy: 50,000 psi	Fty: 46,000 psi Fpy: 50,000 psi
FINISHES INSERT	Hot Dip Galvanized (ASTM A123/A123M or ASTM A153/A153M)	AISI Type 316
FINISHES SHARKTOOTH NUT	Zinc Plated (ASTM B633) Polymer Coating (ASTM B117)	AISI Type 304
FINISHES MACHINE BOLT	Zinc Plated (ASTM B633) Polymer Coating (ASTM B117)	AISI Type 304

IMPORTANT: Since each construction project is unique, the appropriate selection and use of any product contained herein must be determined by competent architects, engineers and other appropriate professionals who are familiar with the specific requirements of the project in question.

HOHMANN & BARNARD, Inc.
30 Rasons Court | Hauppauge, NY 11788
CORPORATE HEADQUARTERS
T: 800.645.0616 F: 631.234.0683
www.h-b.com

Branch/Subsidiary Locations:
ALABAMA - ILLINOIS - MARYLAND
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