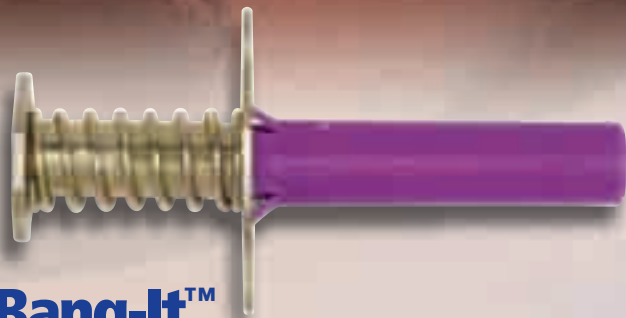


Bang-It & Wood-Knocker

CAST-IN-PLACE SOLUTIONS FOR ROD HANGING

 **Powers**
FASTENERS

Bang-It &



Bang-It™

BANGER-TYPE CAST-IN-PLACE INSERTS

Bang-It Concrete Inserts are designed for installation in and through metal composite deck (i.e. "pan deck") used to support a newly poured concrete floors or roof slabs. After pre-drilling the deck and installing, the protective sleeve of the insert protrudes below the surface of the deck allowing overhead attachment of steel threaded rod in sizes ranging from 1/4" to 7/8" in diameter. The protective sleeve prevents sprayed fireproofing material and acoustical dampening products from clogging the internal threads of the insert. It also prevents burying, masking or losing the insert location. The unique, six-sided impact plate offers resistance to rotation within the concrete as a steel threaded rod is being installed.

Drill the metal pan deck and simply step on the Bang-It. The insert will click into place and fit securely with the deck. After installation, the inserts are ready for the pour. When the concrete is cured the insert is ready to receive rod.



Wood-Knocker™

BANGER-TYPE CAST-IN-PLACE INSERTS

Wood-Knocker Concrete Inserts are installed onto wooden forms used to support newly poured concrete floor slabs, roof slabs or walls. When the forms are stripped, the color-coded flange is easily and visibly embedded in the concrete surface. The inserts allow the attachment of steel threaded rod or threaded bolts in sizes ranging from 1/4" to 3/4" in diameter. The unique six-sided impact plate offers resistance to rotation within the concrete as a steel threaded rod or threaded bolt is being installed.

A coil thread design is available for Wood-Knocker upon request in 1/2" and 3/4" sizes for forming applications.

Woodknockers are simply hammered into the wood forms. The concrete is then poured. After the concrete cures the forms are stripped away, the underside of the insert is exposed and ready to receive rod.



BANG-IT™ PRODUCT OFFERING

CAT. NO.	DESCRIPTION	COLOR CODE	PRE DRILLED HOLE	BOX QTY.	PALLET QTY.
7540	1/4" Bang-It™	Brown	13/16"	100	4,000
7542	3/8" Bang-It™	Green	13/16"	100	4,000
7544	1/2" Bang-It™	Yellow	13/16"	100	4,000
7546	5/8" Bang-It™	Red	1-3/16"	50	2,400
7548	3/4" Bang-It™	Purple	1-3/16"	50	2,400
7549	7/8" Bang-It™	Black	1-3/16"	50	2,400

BANG-IT™ INSTALLATION ACCESSORIES

CAT. NO.	DESCRIPTION	BOX QTY.
7562	13/16" Carbide Hole Saw for 1/4", 3/8" and 1/2" sizes	1
7564	1-13/16" Carbide Hole Saw for 5/8", 3/4" and 7/8" sizes	1
7566	Carbide Hole Saw Center Bit	1

WOOD-KNOCKER™ PRODUCT OFFERING

CAT. NO.	DESCRIPTION	COLOR CODE	BOX QTY.	PALLET QTY.
7550	1/4" Wood-Knocker™	Brown	200	9,600
7552	3/8" Wood-Knocker™	Green	200	9,600
7554	1/2" Wood-Knocker™	Yellow	200	9,600
7556	5/8" Wood-Knocker™	Red	150	6,000
7558	3/4" Wood-Knocker™	Purple	150	6,000
7567	1/2" Coil Thread Wood-Knocker™	Yellow	200	9,600
7568	3/4" Coil Thread Wood-Knocker™	Purple	150	6,000

Threaded inserts are color coded to easily identify location and diameter of the internally threaded coupling, allowing multiple trades on the same job to suspend their systems with various size steel threaded rods.



WHAT ARE BANG-IT AND WOOD-KNOCKER CONCRETE INSERTS USED FOR?

- Pipe hanging
- Conduit
- Eye rod
- Cable Trays
- Lighting systems
- Strut channels
- Overhead utilities
- Sprinkler systems
- Drop ceilings
- HVAC duct
- Electrical
- Refrigeration

WHO USES BANG-IT AND WOOD-KNOCKER CONCRETE INSERTS?

- Plumbers
- Maintenance Contractors
- Electricians
- General Contractor
- Sprinkler Contractors
- Mechanical Contractors
- HVAC Contractors
- Forming Work

WHY BANG-IT OR WOOD-KNOCKER VS. OTHER SYSTEMS?

- Lower "IN-PLACE" cost
- Fast and simple to install
- Powers Support
- 2 systems for all rod hanging
- 15-year performance warranty
- Jobsite service
- Safe and Reliable Anchors

COMPETITIVE ADVANTAGES

Powers Bang-It and Wood-knocker

- Patented hex head does not rotate when set
- Several approvals and listings (FM, UL)
- Higher load values due to full thread engagement
- Full length thread design will not strip
- Powers nationally supports 28 stocking locations
- 15 Year Performance Warranty
- Jobsite Service (48 Powers Training Vehicles)
- 80 years of concrete anchoring expertise
- Color coded by size for all trades
- Rod entry point is molded with 8 slots for easy access
- Deck plate has flat edges and won't move

LABOR SAVINGS VS. TRADITIONAL DROPIN ANCHORS

SAVE MORE THAN 50% PER HOLE

BASE MATERIAL CONCRETE	SPEED OF INSTALLATION	INSTALLED COST	INSTALLATION DIFFICULTY	TYPICAL COST INSTALLED (3/8" SIZE)				
				LABOR/MIN	TIME	LABOR COST	MATERIAL	TOTAL COST
Woodknocker	Fast	Low	Easy	\$0.77	1	\$0.77	\$1.18	\$1.95
Steel Dropin	Slow	High	High	\$0.77	11	\$8.47	\$0.44	\$8.91

SAVE \$6.96 SAVE 78%

BASE MATERIAL CONCRETE	SPEED OF INSTALLATION	INSTALLED COST	INSTALLATION DIFFICULTY	TYPICAL COST INSTALLED (3/8" SIZE)				
				LABOR/MIN	TIME	LABOR COST	MATERIAL	TOTAL COST
Bang-It	Medium	Low	Medium	\$0.77	3	\$2.31	\$2.27	\$4.58
Steel Dropin	Slow	High	High	\$0.77	11	\$8.47	\$0.44	\$8.91

SAVE \$4.33 SAVE 49%

*Labor rates based on ENR 20-City average of hourly pay scales for Electricians, Plumbers and Steamfitters, report dated June 2002.

INSTALLATION SPECIFICATIONS

Bang-It Concrete Inserts

SIZE (IN)	1/4	3/8	1/2	5/8	3/4	7/8
Metal Hole Saw Diameter (in)	13/16	13/16	13/16	1-3/16	1-3/16	1-3/16
Drilling Speed (rpm)	800	800	800	600	600	600
Height of Spring (in)	2	2	2	2	2	2
Insert Thread Length (in)	3/8	5/8	11/16	15/16	1-1/8	1-15/16
Length of Sleeve (in)	3-3/8	3-3/8	3-3/8	3-3/8	3-3/8	3-3/8
Thread Size (UNC)	1/4-20	3/8-16	1/2-13	5/8-11	3/4-10	7/8-8
Overall Length (in)	5-5/16	5-5/16	5-5/16	5-5/16	5-5/16	5-5/16
Flange Thickness (in)	5/64	5/64	5/64	5/64	5/64	5/64

Wood-Knocker Concrete Inserts

SIZE (IN)	1/4	3/8	1/2	5/8	3/4
Insert Thread Length (in)	3/8	5/8	11/16	15/16	1-1/8
Plastic Flange Diameter (in)	1-3/8	1-3/8	1-3/8	1-5/8	1-5/8
Plastic Flange Thickness (in)	7/64	7/64	7/64	7/64	7/64
Thread Size (UNC)	1/4-20	3/8-16	1/2-13	5/8-11	3/4-10
Overall Length (in)	1-7/8	1-7/8	1-7/8	1-7/8	1-7/8
Break-off Nail Length (in)	3/4	3/4	3/4	3/4	3/4

Bang-It &

INSTALLATION PROCEDURE FOR BANG-IT™

Prior to pouring concrete, use the recommended diameter metal hole saw to drill a hole through the metal deck at the location the insert is needed. Typically, inserts are installed in the upper flute (crest) of the metal deck for easier access during installation. However, it is also acceptable to install the insert in the lower flute of the metal deck.

From the topside of the metal deck, place the Bang-It Concrete Insert's color-coded, plastic protective sleeve through the pre-drilled hole. The oversized steel flange will balance the spring-loaded impact plate and cause it to stand upright. Either step on the Bang-It with your foot or using a hand held hammer, strike the head of the Bang-It with enough force to cause the tapered portion of the protective plastic sleeve to push through the metal deck, clamping the deck surface between the sleeve and the flange. When all inserts are installed, concrete pouring may commence. The clamping pressure generated by the spring keeps the sleeve perpendicular to the deck surface during the pour. Either before or after the concrete has been placed, tap the appropriate diameter steel threaded rod through the opening at the end of the plastic sleeve and screw into the internally threaded insert. The threaded rod should fully engage the thread length of the insert. Concrete should be allowed to properly cure and achieve its design compressive strength before loading the threaded rod with the intended assembly.

For safety purposes, it is best to wait until the insert is ready to be put in service before screwing the steel threaded rod into place.

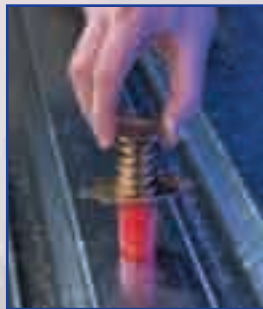
Note: UL listing for 1/2" Bang-It is for the crest of the metal deck only.



Chuck Carbide Hole Saw



Drill deck holes



Push Bang-It into place



Set by stepping on Bang-It



Pour concrete. Then Install rod

INSTALLATION PROCEDURE FOR WOOD-KNOCKER™

Prior to pouring concrete over the wood form, place the Wood-Knocker Concrete Insert (break-off nails down) on the surface of the wood form at the desired location. Strike the impact plate of the insert with a hand held hammer, until the plastic color-coded flange is flush with the wood surface. When all inserts are installed, concrete pouring may commence.

After the wood forms are removed, the three break-off nails and color-coded flange are left exposed. Carefully remove any unbroken nails by swiping with a hammer. Eye protection should be worn when removing the break-off nails. The appropriate diameter steel rod or threaded bolt can be inserted into the opening of the flange and screwed into the internally threaded insert. The rod or bolt should fully engage the thread length of the insert. Concrete should be allowed to properly cure and achieve its design compressive strength before loading the rod or threaded bolt with the intended assembly.

For safety purposes, it is best to wait until the insert is ready to be put in service before screwing the steel threaded rod into place.

Note: UL listing for 5/8" Wood-Knocker is for 8" pipe maximum.



Set Wood-Knocker into place



Hammer in insert



Pour concrete



Install rod



BANG-IT™ PERFORMANCE DATA

Ultimate Load Capacities in Minimum 3,000 psi Lightweight Concrete over Metal Deck

ANCHOR SIZE	ANCHOR LOCATION IN FLUTE	EMBED. DEPTH	INSERT SPACING	END DISTANCE	TENSION LOAD	SHEAR LOAD
1/4"	Upper	2"	9"	12"	4,250 lbs.	2,725 lbs.
1/4"	Lower	2"	9"	12"	3,250 lbs.	2,725 lbs.
3/8"	Upper	2"	9"	12"	6,200 lbs.	3,450 lbs.
3/8"	Lower	2"	9"	12"	3,250 lbs.	3,450 lbs.
1/2"	Upper	2"	9"	12"	7,150 lbs.	3,450 lbs.
1/2"	Lower	2"	9"	12"	3,250 lbs.	3,450 lbs.
5/8"	Upper	2"	9"	12"	8,150 lbs.	3,450 lbs.
5/8"	Lower	2"	9"	12"	4,250 lbs.	3,450 lbs.
5/8"	Lower	2"	12"	12"	4,250 lbs.	4,150 lbs.
3/4"	Upper	2"	9"	12"	8,150 lbs.	3,450 lbs.
3/4"	Lower	2"	9"	12"	4,250 lbs.	3,450 lbs.
3/4"	Lower	2"	12"	12"	4,250 lbs.	5,000 lbs.
7/8"	Upper	2"	9"	12"	8,150 lbs.	3,450 lbs.
7/8"	Lower	2"	9"	12"	4,250 lbs.	3,450 lbs.
7/8"	Lower	2"	12"	12"	4,250 lbs.	5,000 lbs.

*Anchors in shear loaded perpendicular to the edge with a 1" effective edge distance.

Data is in accordance with latest acceptance criteria and standards. Average published load values are based on testing with A193 Grade B7 high strength rod. The minimum recommended thickness of the concrete base material used with the inserts is 3". Cast-in-Place inserts are suitable for seismic and dynamic loading. Bang-It and Wood-Knocker inserts are recognized for use in air handling spaces. Depending on application and governing building code, the average ultimate load capacities should be reduced by a minimum factor of safety to determine the allowable working load.

WOOD-KNOCKER™ PERFORMANCE DATA

Ultimate Load Capacities in Minimum 3,000 psi Normal Weight and Lightweight Concrete

ANCHOR SIZE	EMBED. DEPTH	INSERT SPACING	END DISTANCE	TENSION LOAD	SHEAR LOAD
1/4"	2"	9"	6"	4,250 lbs.	2,725 lbs.
3/8"	2"	9"	6"	4,250 lbs.	5,275 lbs.
1/2"	2"	9"	6"	4,250 lbs.	7,175 lbs.
5/8"	2"	9"	6"	4,500 lbs.	6,000 lbs.
5/8"	2"	12"	6"	4,500 lbs.	7,500 lbs.
3/4"	2"	9"	6"	4,500 lbs.	6,000 lbs.
3/4"	2"	12"	6"	4,500 lbs.	7,500 lbs.

Ultimate Load Capacities in Minimum 4,500 psi Normal Weight Concrete

ANCHOR SIZE	EMBED. DEPTH	INSERT SPACING	END DISTANCE	TENSION LOAD	SHEAR LOAD
1/4"	2"	9"	6"	4,500 lbs.	1,600 lbs.
3/8"	2"	9"	6"	7,000 lbs.	5,600 lbs.
1/2"	2"	9"	6"	7,000 lbs.	8,600 lbs.
5/8"	2"	9"	6"	7,350 lbs.	13,000 lbs.
3/4"	2"	9"	6"	7,350 lbs.	14,600 lbs.

THREADED ROD SPECIFICATIONS

GRADE DESIGNATION	NOMINAL SIZE RANGE	MINIMUM YIELD STRENGTH F _y (ksi)	MINIMUM ULTIMATE STRENGTH F _u (ksi)
ASTM A36	All	36	58
ASTM A307, C	1/4" to 4"	36	58
ASTM A193, B7	1/4" to 2-1/2"	105	125
ASTM F593-	1/4" thru 5/8"	65	100
AISI 304/316 SS	3/4" thru 1-1/2"	45	85

THREADED ROD DIAMETER	NOMINAL AREA OF ROD (in ²)	ULTIMATE TENSION LOADS BASED ON STEEL STRENGTH (LBS)			
		A 36	A 307 GRADE C	A 193 GRADE B7	F593 (A304/316 SS)
1/4"	0.0491	2,945	2,945	6,140	4,910
3/8"	0.1104	6,625	6,625	13,800	11,040
1/2"	0.1963	11,770	11,770	24,540	19,630
5/8"	0.3068	18,410	18,410	38,350	30,680
3/4"	0.4418	26,510	26,510	55,225	37,555
7/8"	0.6013	36,078	36,078	75,160	51,110

F_n = 0.33 x F_u
F_v = 0.17 x F_u

Allowable loads for steel can be calculated by multiplying the minimum specified ultimate tensile strength of the threaded rod (psi) by the cross-sectional area of the threaded rod (square inches) and by a safety factor (SF). Tension SF = 0.33; Shear SF = 0.17

MATERIAL SPECIFICATIONS

COMPONENT	BANG-IT MATERIAL	WOOD-KNOCKER MATERIAL
Insert Body	Carbon Steel	Carbon Steel
Flange	Carbon Steel	Carbon Steel
Spring	Steel Music Wire	Engineered Plastic
Plating	ASTM B 633 Zinc with Yellow Dichromate	ASTM B 633 Zinc with Yellow Dichromate
Protective Sleeve	Engineered Plastic	-

UNDERWRITER'S LABORATORIES (UL) AND FACTORY MUTUAL (FM) LISTINGS

Bang-It Concrete Inserts - Lightweight concrete over metal deck

ANCHOR SIZE/ ROD DIA.	ANCHOR LOCATION IN FLUTE	EMBEDDED DEPTH	UL MAX PIPE SIZE	UL TEST LOAD	FM MAX PIPE SIZE	FM MAX LOAD
3/8"	Upper	2"	4"	1,500 lbs.	4"	1,450 lbs.
3/8"	Lower	2"	4"	1,500 lbs.	4"	1,450 lbs.
1/2"	Upper	2"	8"	4,050 lbs.	8"	3,800 lbs.
5/8"	Upper	2"	-	-	12"	7,900 lbs.

Wood-Knocker Concrete Inserts - Form poured concrete members

ANCHOR SIZE/ ROD DIA.	EMBEDDED DEPTH	UL MAX PIPE SIZE	UL TEST LOAD	FM MAX PIPE SIZE	FM MAX LOAD
3/8"	2"	4"	1,500 lbs.	4"	1,450 lbs.
1/2"	2"	8"	4,050 lbs.	8"	3,800 lbs.
5/8"	2"	8"	4,050 lbs.	-	-

NFPA 13 Fire protection fastening requirements are five times the weight of the liquid (water) filled pipe plus 250 lbs. Consult the Engineer of Record. Underwriters Laboratories (UL) - File No. EX1289. Recognized for use in air handling spaces. Factory Mutual (FM Approvals) - File No. J.I. 3015153





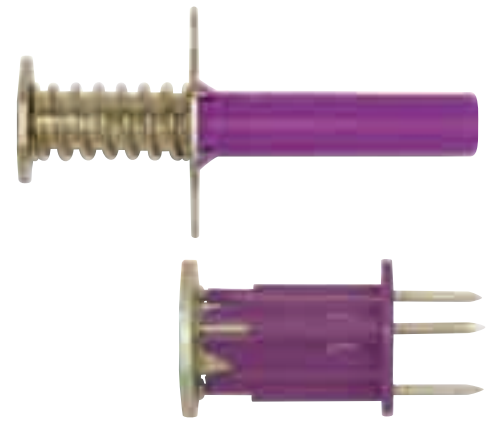
Bang-It Inserts for Concrete Over Metal Decking Wood-Knocker Inserts for Wood Formed Concrete Slabs

POWERS FASTENERS, INC. (RAWL)

Anchoring into Concrete and Lightweight Concrete
Ideal for Concrete Form Pours

A One Piece Banger-Type Cast-In-Place Insert
A Fast, Safe, and User-friendly Method to Hang Rod Overhead
Simple Installation Reduces Costs and Improves Efficiency

Zinc Plated Carbon Steel with Engineered Plastic
Color Coded Flange and Sleeve Allows for Size Identification
Available sizes of 1/4" to 3/4" in Diameter (Bang-It available in 7/8" dia.)



PROJECT SUBMITTAL

- Product Substitution Form
- Product Description and General Information
- Engineering Data and Material Properties
- System Components and Accessories
- Guide Specifications and Approvals

PRODUCT APPROVALS

Factory Mutual Research Corporation (FMRC) - File No. J.I. 3015153
 Underwriters Laboratories (UL) - File No. EX1289
 Recognized for use in Air Handling Spaces
 Suitable for Seismic and Wind Load Applications
 Acceptable for Applications in DOT Projects



Please consider improving your specifications with Powers Fasteners products





PRODUCT SUBMITTAL / SUBSTITUTION REQUEST

TO:

PROJECT:

SPECIFIED ITEM:

Section:

Page:

Paragraph:

Description:

PRODUCT SUBMITTAL / SUBSTITUTION REQUESTED:

The attached submittal package includes the product description, specifications, drawings, and performance data for use in the evaluation of the request.

SUBMITTED BY:

Name:

Signature:

Company:

Address:

Date:

Telephone:

Fax:

FOR USE BY THE ARCHITECT AND/OR ENGINEER:

Approved **Approved as Noted** **Not Approved**

(If not approved, please briefly explain why the product was not accepted)

By:

Date:

Remarks:



POWERS FASTENERS **BRANCH INFORMATION**

USA LOCATIONS

CITY	ADDRESS	CONTACT	PHONE	FAX
Atlanta	5405 Buford Hwy Suite 220 Norcross, GA 30071-3984	Robert Brito	678-966-0000	678-966-9242
Boston	177 North Falmouth Hwy, North Falmouth, MA 02556	Jack Armour	800-524-3244	914-576-6483
Charlotte	349 L West Tremont Avenue, Charlotte, NC 28203	Jim Karoly	704-375-5012	704-376-5517
Chicago	2472 Wisconsin Avenue, Downers Grove, IL 60515	Dan Gilligan	630-960-3156	630-960-3912
Dallas	see Houston	Joe Jackson	214-638-5043	713-228-1528
Denver	221 Wyandot Street Denver, CO 80223	Aaron Minnis	303-922-9202	303-922-9228
Detroit	21600 Wyoming Avenue, Oak Park, MI 48237	Glen Gaskill	248-543-8600	248-543-8601
Florida	9208 Palm River Road, Bldg. 3, Suite 305, Tampa, FL 33619	Michael Gaffigan	954-981-6955	954-965-0513
Houston	102 Sampson Houston, TX 77003	Jimmy Thompson	713-228-1524	713-228-1528
Indianapolis	15290 Stony Creek Way, Noblesville, IN 46060	Bill Trainor	317-773-1668	317-773-1690
Kansas City / St Louis	716 East 16th Avenue, North Kansas City, MO 64116	Don James, Jr.	816-472-5038	816-472-5040
Los Angeles	2761 Dow Avenue, Tustin, CA 92780	Jack Stewart	714-731-2500	714-731-2566
Maryland	6626 Virginia Manor Road, Beltsville, MD 20705	Gary Engleman/Chris Van Syckle	301-210-1430	301-210-1435
Milwaukee	12020 W. Feerick Street, Milwaukee, WI 53222	Donn Raduenz	414-466-2400	414-466-3993
Minneapolis	351 Wilson Street, NE Minneapolis, MN 55413	Rick Gruye	612-331-3756	612-331-3549
Nashville/Memphis	221 Blanton Avenue, Nashville, TN 37210	Ira Liss	615-248-2667	615-248-2676
New Orleans	317 West 24th Avenue, New Orleans, LA 70815	Cal Zenor	888-779-3667	225-928-5809
New York	2 Powers Lane, Brewster, NY 10509	John Partridge	914-235-6300	914-576-6483
Philadelphia	2 Powers Lane, Brewster, NY 10509	Jeff Walker	215-778-5143	914-576-6483
Phoenix	3602 E. Southern Ave, Suite 5 Phoenix, AZ 85040	Craig Hering	602-431-8024	602-431-8027
Pittsburgh	1360 Island Avenue, McKees Rocks, PA 15136	Bill Dugan	412-771-3010	412-771-9858
Rochester	410 Atlantic Avenue, Rochester, NY 14609	Mike Kolstad	585-288-2080	585-288-8732
Salt Lake City	2212 SW Temple #4, Salt Lake City, UT 84115	Bruce Burnett	801-466-3406	801-484-0731
San Francisco	28970 Hopkins Street, Suite D, Hayward, CA 94545	Frans Honig	510-293-1500	510-293-1505
Seattle	129 South Kenyon, Seattle, WA 98108	Darin Arnold/Jim Swink	206-762-5812	206-762-5817

INTERNATIONAL LOCATIONS

CITY	ADDRESS	CONTACT	PHONE	FAX
Canada	7407 Bren Road Mississauga Ontario L4T 1H3	Mark Russell	905-673-7295	905-673-6490
British Columbia	63 Fawcett Road Coquitlam, V3K 6V2	Distributor	604-540-0200	604-540-0212
Manitoba	1810 Dublin Avenue Man. Winnipeg, R3H 0H3	Distributor	204-633-0064	204-694-1261
Quebec	For name of nearest distributor call Powers Industries Ltd at	Mark Russell	514-631-4216	514-631-2583
Europe	J. Van Stolbergstraat 11 1723LB Noord-Scharwoude Netherlands	Paul Geuvers	+31 226 357 670	+31 226 358 817
Australia	Factory 3, 205 Abbotts Road, Dandenong, South Victoria 3175	Phil Rose	+61 3 8787 5888	+61 3 8787 5899
New Zealand	PO Box 302 076 North Harbour Auckland	Claye Sesto	+64 9415 2425	+64 9415 2627
Thailand	80/89 MOO4 Petchakasem Road, Bangkae Bangkok 10160	Chalee Surakavanichakorn	+661 826 5821	
Venezuela	Calle Sucre/Qta. Maudora, #1721 Entre Cec Acosta Y San Ignacio Chacao, Caracas	Distributor	58 212 264 1313	58 212 263 0219

Note: The information and data contained within this documentation was current as of January 2007. The information is subject to change and is updated as needed. Powers Fasteners, Inc. reserves the right to change designs and specifications without notice or liability for such changes. Please contact Powers Fasteners for the most current and up to date available information or refer to our website at www.powers.com

Powers Fasteners 2 Powers Lane, Brewster, NY 10509 P: (914) 235-6300 F: (914) 576-6483

Powers Industries Ltd. 7407 Bren Road Mississauga Ontario L4T 1H3 Canada P: (905) 673-7295 F: (905) 673-6490

www.powers.com

Cat. No. 49054 1/07

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