

Snake+"

Internally Threaded Screw Anchor

PRODUCT DESCRIPTION

The Snake+ anchor is an internally threaded, self-tapping screw anchor designed for performance in cracked and uncracked concrete. Suitable base materials include normal-weight concrete, structural sand-lightweight concrete and concrete over steel deck. The Snake+

> screw anchor is installed into a drilled hole with a power tool and a Snake+ setting tool. After installation a steel insert element is threaded into the anchor body.

GENERAL APPLICATIONS AND USES

- Suspending conduit
- Cable trays and strut
- Pipe supports
- Fire sprinklers
- Interior applications/low level corrosion environment
- Tension zone applications
- Seismic wind loading applications
- Suspended lighting

FEATURES AND BENEFITS

- Designed for use in holes drilled with standard ANSI carbide drill bits
- Anchor design allows for shallow embedment and mechanically interlocks with
- Internally threaded anchor for easy adjustment and removability of threaded rod or bolt
- Fast anchor installation with a powered impact wrench
- Hammer not used for installation

APPROVALS AND LISTINGS

- International Code Council, Evaluation Service (ICC-ES), ESR-2272
- Tested in accordance with ACI 355.2 and ICC-ES AC193 for use in concrete under the design provisions of ACI 318 (Strength Design method using Appendix D)
- Evaluated and qualified by an accredited independent testing laboratory for use in cracked and uncracked concrete including seismic and wind loading (Category 1 anchor)
- Evaluated and qualified by an accredited independent testing laboratory for reliability against brittle failure, e.g. hydrogen embrittlement
- FM Global (FM Approvals) for use in concrete File No. 3024502

GUIDE SPECIFICATIONS

CSI Divisions: 03151-Concrete Anchoring and 05090-Metal Fastenings. Internally threaded anchors shall be Snake+ screw anchors as supplied by Powers Fasteners, Inc., Brewster, NY. Anchors shall be installed in accordance with published instructions and the Authority Having Jurisdiction.

INTERNAL THREAD VERSION

Unified coarse thread (UNC)

ANCHOR MATERIALS

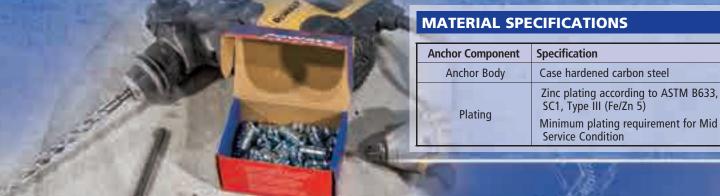
Zinc plated carbon steel body

ANCHOR SIZE RANGE (TYP.)

1/4", 3/8" and 1/2" diameters

SUITABLE BASE MATERIALS

Normal-weight concrete Structural sand-lightweight concrete Concrete over steel deck



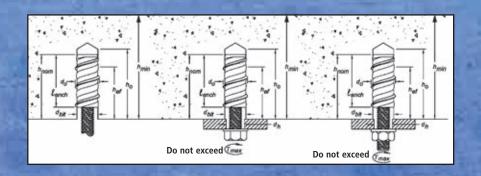
INSTALLATION SPECIFICATIONS

Installation Information for Snake+ Screw Anchor for Single Point Applications^{1,3}

Angles Property / Setting Information	Notation	Units		Nominal Anchor Size	e
Anchor Property / Setting Information	Notation	Units	1/4"	3/8"	1/2"
Nominal outside anchor diameter	d _a	in. (mm)	0.375 (9.5)	0.500 (12.7)	0.750 (19.1)
Internal thread diameter (UNC)	d	in. (mm)	0.250 (6.4)	0.375 (9.5)	0.500 (12.7)
Drill bit diameter	d _{bit}	in.	3/8 ANSI	1/2 ANSI	3/4 ANSI
Minimum hole depth	h _o	in. (mm)	2 (51)	2 (51)	2-1/2 (64)
Minimum concrete member thickness ²	h _{min}	in. (mm)	3 (76)	4 (102)	4 (102)
Overall anchor length	$oldsymbol{\ell}_{\scriptscriptstyle{anch}}$	in. (mm)	1-1/4 (32)	1-1/4 (32)	1-11/16 (43)
Nominal embedment depth	h _{nom}	in. (mm)	1-5/8 (41)	1-5/8 (41)	2-3/16 (55)
Effective embedment	h _{ef}	in. (mm)	Not Applicable	1.10 (28)	1.54 (39)
Minimum edge distance ²	C _{min}	in. (mm)	Not Applicable	3 (76)	4 (102)
Minimum spacing distance ²	S _{min}	in. (mm)	Not Applicable	3 (76)	4 (102)
Critical edge distance ²	C _{ac}	in. (mm)	Not Applicable	3 (76)	4 (102)
Maximum impact wrench power (torque)	T _{screw}	ftlb. (N-m)	120 (163)	345 (468)	345 (468)
Maximum tightening torque of steel insert element (threaded rod or bolt)	T _{max}	ftlb. (N-m)	4 (6)	14 (19)	36 (49)

- 1. The information presented in this table is to be used in conjunction with the design criteria of ACI 318 Appendix D.

 2. For installations through the soffit of steel deck into concrete, see illustration detail. Anchors in the lower flute may be installed with a maximum 1-inch offset in either direction from center of the flute. In addition, anchors shall have an axial spacing along the flute equal to the greater of $3h_x$ or 1.5 times the flute width.
- 3. The notation in parenthesis is for the 2009 IBC.

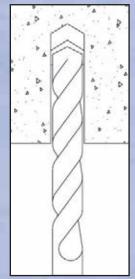


Snake+[™]

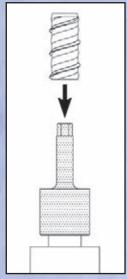


INSTALLATION SPECIFICATIONS

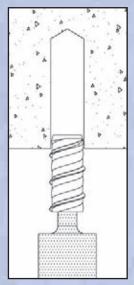
Installation Instructions for Snake+ Screw Anchor



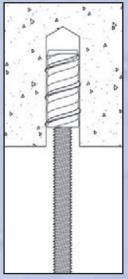
1.) Using the proper drill bit size, drill a hole into the base material to the required depth. The tolerances of the carbide drill bit used should meet the requirements of ANSI Standard B212.15.



2.) Select a powered impact wrench that does not exceed the maximum torque, T_{screen}, for the selected anchor diameter. Attach the Snake+ setting tool supplied by Powers Fasteners to the impact wrench. Mount the anchor onto the setting tool.

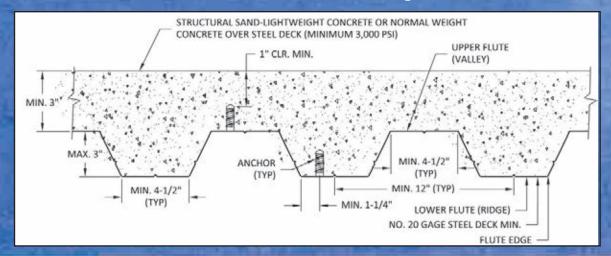


3.) Drive the anchor into the hole until the shoulder of the Snake+ setting tool comes into contact with the surface of the base material. Do not spin the setting tool off the anchor to disengage.



4.) Insert threaded rod or a bolt into the Snake+, taking care not to exceed the maximum specified tightening torque of the steel insert element, T_{max}. Minimum thread engagement should be at least one anchor diameter.

Installation Detail for Snake+ Screw Anchor Installed Through Soffit Steel Deck into Concrete



PERFORMANCE DATA

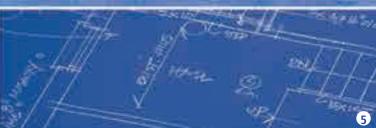
Tension Design Information (For use with load combinations taken from ACI 318 Section 9.2)^{1,2}

Tension Design Information (For use with load combinations taken from								
Design Characteristic	Notation	U	nits		nchor Size			
Design enaracteristic				3/8"	1/2"			
Anchor category	1, 2 or 3			1	1			
Nominal embedment depth	h _{nom}	(in. mm)	1-5/8 (41)	2-3/16 (41)			
		RENGTH IN		(+1)	(41)			
			ASTM A36		5.0			
Minimum specified yield strength of steel insert element	f _y	ksi (N/mm²)	ASTM A193,	105.0	48)			
			Grade B7	(724)	-			
Minimum specified ultimate strength	c 11	ksi	ASTM A36	58	3.0 00)			
of steel insert element	f _{ut} ¹¹	(N/mm²)	ASTM A193, Grade B7	125.0	-			
Effective tensile stress area of steel	۸		in²	(862) 0.0775	0.1419			
insert element	A _{se}	(1	mm²)	(50) 4,495	(50) 8,230			
Steel strength in tension	N _{sa} ¹¹	lb	ASTM A36	(20.0)	(37.0)			
Steel strength in tension	IN sa	(kN)	ASTM A193, Grade B7	9,685 (43.1)	-			
Reduction factor for steel strength ^{3,4}	φ	-	-	0.	65			
CONCRETE BREAKOUT STRENGTH IN TENSION [®]								
Effective embedment	h _{ef}		in. mm)	1.10 (28)	1.54 (39)			
Effectiveness factor for uncracked concrete	k _{unor}		-	24	30			
Effectiveness factor for cracked concrete	k _{uncr}		-	17	24			
Modification factor for cracked and uncracked concrete	Ψ _{ς,N} 11		Cracked concrete = 1 Uncracked concrete =					
Critical edge distance	C _{ac}		in mm)	3 (76)	4 (102)			
Reduction factor for concrete breakout strength ³	φ			Condition B = 0.65				
PULLOUT STRE	NGTH IN TEI	NSION (NO	N-SEISMIC A	PPLICATIONS) ⁸				
Characteristic pullout strength, uncracked concrete (2,500 PSI) ⁶	N _{p,una}		lb (kN)	See note 7	See note 7			
Characteristic pullout strength, cracked concrete (2,500 PSI) ⁶	$N_{p,\alpha}$		lb (kN)	See note 7	See note 7			
Reduction factor for pullout strength ³	φ		-	Condition	n B = 0.65			
PULLOUT STRE	NGTH IN TEI	NSION (NO	N-SEISMIC A	PPLICATIONS) ⁸				
Characteristic pullout strength, seismic (2,500PSI) ^{6,9}	N _{eq}		lb (kN)	See note 7	See note 7			
Reduction factor for pullout strength seismic ³	φ		-	Condition	n B = 0.65			
PULLOUT STRENGTH			TURAL SAND		AND			
Characteristic pullout strength, uncracked concrete over steel deck ^{6,10}	N _{p,dedk,uncr}		lb (kN)	1,515 (6.7)	1,625 (7.2)			
Characteristic pullout strength, cracked concrete over steel deck 6,10	N _{p,deck,a}		lb (kN)	1,075 (4.8)	1,075 (4.8)			
Reduction factor for steel deck ³	φ			Condition B = 0.65				

- The data in this table is intended to be used with the design provisions of ACI 318 Appendix D; for anchors resisting seismic load combinations the additional requirements of Section D.3.3 shall apply.
- 2. Installation must comply with published instructions and details.
- 3. All values of ϕ were determined from the load combinations of ACI 318 Section 9.2. If the load combinations of ACI 318 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318 Section D.4.5.
- 4. It is assumed that the threaded rod or bolt used with the Snake+ anchor will be a steel element as defined by ACI 318 Section D.1. However, the anchor steel is classified as non-ductile in seismic tension calculations. Steel failure does not control in this condition.
- 5. For all design cases use $\psi_{c,N} = 1.0$. Select appropriate effectiveness factor for cracked concrete (k_{α}) or uncracked concrete $(k_{\mu\nu})$.
- For all design cases use ψ_{c,p} = 1.0. For concrete compressive strength greater than 2,500 psi, N_{pn} = (Pullout strength value from table)*(specified concrete compressive strength/2500)^{0.5}.
- Pullout strength will not control design of indicated anchors. Do not calculate pullout strength for indicated anchor size and embedment.
- Anchors are permitted to be used in structural sandlightweight concrete provided that N_b and N_{pn} are multiplied by a factor of 0.60 (not required for steel deck).
- Reported values for characteristic pullout strength in tension for seismic applications are based on test results per ACI 355.2, Section 9.5.
- 10. Values for Np, deck are for structural sand-lightweight concrete (f'c, min = 3,000 psi) and additional lightweight concrete reduction factors need not be applied. In addition, evaluation for the concrete breakout capacity in accordance with ACI 318 Section D.5.2 is not required for anchors installed in the flute (soffit).
- 11. For 2003 IBC, f_{uta} replaces f_{ut} , N_{sa} replaces $N_{s'}$, $\psi_{c,N}$ replaces $\psi_{3'}$, and N_{eq} replaces N_{node} .
- 12. The notation in brackets is for the 2009 IBC.









PERFORMANCE DATA

Shear Design Information (For use with load combinations taken from ACI 318 Section 9.2)^{1,2}

Design Chavestovistic	Natation		Units	Nominal Anchor Size				
Design Characteristic	Notation	Ullits		3/8"	1/2"			
Anchor category	1, 2 or3		-	1	1			
Nominal embedment depth	h _{nom}		in. (mm)	1-5/8 (41)	2-3/16 (55)			
STEEL STRENGTH IN SHEAR'								
Minimum specified yield strength		ksi	ASTM A36		6.0 48)			
of steel insert element	f _y	(N/mm²)	ASTM A193, Grade B7	105.0 (724)	-			
Minimum specified ultimate strength of		ksi	ASTM A36		8.0 (00)			
steel insert element	f _{ut}	(N/mm²)	ASTM A193, Grade B7	125.0 (862)	-			
Effective tensile stress area of steel insert element	A_{se}		in ² (mm ²)	0.0775 (50)	0.1419 (50)			
5	10	lb	ASTM A36	770 (3.4)	1,995 (8.9)			
Steel strength in shear ³	V_{sa}^{10}	(kN)	ASTM A193, Grade B7	1,655 (7.4)	-			
Reduction factor for steel strength ³	φ	-		0	.60			
CONCRETE BREAKOUT STRENGTH IN SHEAR ⁶								
Effective embedment	$\mathbf{h}_{\scriptscriptstyle{ef}}$		in. (mm)	1.10 (28)	1.54 (39)			
Load bearing length of anchor (h _{ef} or 8d _o whichever is less)	ℓ _e 10		in. (mm)	1.10 (28)	1.54 (39)			
Critical edge distance	ϕ		-	3 (76)	4 (102)			
Reduction factor for concrete breakout ³	φ		-	Condition B = 0.70				
	PRYOUT	STRENGTH	IN SHEAR ⁶	<u> </u>				
Coefficient for pryout strength (1.0 for $h_{ef} < 2.5$ in.)	k _p			1.0	2.0			
Reduction factor for pullout strength ³	φ			Conditio	n B = 0.70			
STEEL STR	ENGTH IN S	HEAR FOR S	SEISMIC APPLICAT	TIONS'				
Steel strength in shear, seismic	$V_{\rm eq}^{10}$	lb	ASTM A36	770 (3.4)	1,995 (8.9)			
Reduction factor for pullout strength seismic ³	φ	(kN)	ASTM A193, Grade B7	1,655 (7.4)	-			
SHEAR STRENGTH				TWEIGHT AND				
Steel strength in shear,	$V_{\text{sa,deck}}$	lb (kN)	ASTM A36 ASTM A193,	770 (3.4) 1.655	1,995 (8.9)			
	Jujucch	(KIV)	Grade B7	(7.4)	-			
Reduction factor for steel strength in shear concrete over stud deck	φ		ř	Conditio	n B = 0.60			

- The data in this table is intended to be used with the design provisions of ACI 318 Appendix D; for anchors resisting seismic load combinations the additional requirements of ACI 318 D.3.3 shall apply.
- 2. Installation must comply with published instructions and details.
- 3. All values of ϕ were determined from the load combinations of UBC Section 1605.2.1, UBC Section 1612.2.1, or ACI 318 Section 9.2. If the load combinations of UBC Section 1902.2 or ACI 318 Appendix C are used, the appropriate value of ϕ must be determined in accordance with ACI 318 D.4.5. For reinforcement that meets ACI 318 Appendix D requirements for Condition A, see ACI 318 D.4.4 for the appropriate ϕ factor.
- 4. It is assumed that the threaded rod or bolt used with the Snake+ anchor will be a steel element as defined by ACI 318 D.1.
- Tabulated values for steel strength in shear must be used for design. These tabulated values are lower than calculated results using equation D-20 in ACI 318-08 (ACI 318-05) and ACI 318 D.6.1.2.
- Anchors are permitted to be used in structural sand-lightweight concrete in accordance with Section 4.1.11 of this report.
- Tabulated values for steel strength in shear are for seismic applications and based on test results in accordance with ACI 355.2 Section 9.6.
- Tabulated values for Vsa,deck are for structural sand-lightweight concrete (f'c,min = 3,000 psi) and additional lightweight concrete reduction factors need not be applied. In addition, evaluation for the concrete breakout capacity in accordance with ACI 318 D.6.2 and the pryout capacity in accordance with ACI 318 D.6.3 are not required for anchors installed in the deck soffit (flute).
- Shear loads for anchors installed through steel deck into concrete may be applied in any direction
- 10. For 2003 IBC, f_{uta} replaces f_{ut} ; Vsa replaces $V_{s'}$ ℓ_e replaces ℓ_r and V_{eq} replaces $V_{s'seis}$.
- 11. The notation in parenthesis is for the 2009 IBC.

Factored Resistance Strength (ϕ N_a and ϕ V_{ϕ}) Calculated in Accordance with ACI 318-05 Appendix D:

- 1. Tabular values are are provided for illustration and applicable for single anchors installed in normal-weight concrete with minimum slab thickness, h_s = h_{min}, and with the following conditions: - c_{a1} is greater than or equal to the critical edge distance, c_{a2} (table values based on $c_{a1} = c_{a2}$).
- c_{al} is greater than or equal to 1.5 times c_{al} . 2. Calculations were performed according to ACI 318-05 Appendix D. The load level corresponding to the controlling failure mode is listed (e.g. For tension: steel, concrete breakout and pullout; For shear: steel, concrete breakout and pryout). Furthermore, the capacities for concrete breakout strength in tension and pryout strength in shear are calculated using the effective embedment values, her for the selected anchors as noted in the design information tables. Please also reference the installation specifications for more information.
- 3. Strength reduction factors (ϕ) were based on ACI 318 Section 9.2 for load combinations. Condition B is assumed.
- 4. Tabular values are permitted for static loads only, seismic loading is not permitted with these tables.
- 5. For designs that include combined tension and shear, the interaction of tension and shear loads must be calculated in accordance with ACI 318 Appendix D.
- 6. Interpolation is not permitted to be used with the tabular values. For intermediate base material compressive strengths please see ACI 318 Appendix D. For other design conditions including seismic considerations please see ACI 318 Appendix D.



Tension and Shear Factored Design Strength for Snake+ in Cracked Concrete

		Steel	Minimum Concrete Compressive Strength, f'c (psi)									
Nominal	Nominal	Insert	2,5	500	3,0	00	4,0	000	6,0	000	8,0	00
Anchor Size (in.)	Embed. h _{nom} (in.)	Element (Threaded Rod or Bolt)	φΝ, Tension (lbs.)	φV _n Shear (lbs.)	φΝ, Tension (lbs.)	$\phi V_{_{n}}$ Shear (lbs.)	φΝ, Tension (lbs.)	φV _n Shear (lbs.)	ϕ $N_{_{n}}$ Tension (lbs.)	φV _n Shear (lbs.)	φΝ _n Tension (lbs.)	$\phi V_{_{n}}$ Shear (lbs.)
2/0	4.5/0	ASTM A36	635	500	700	500	805	500	985	500	1,140	500
3/8 1-5/8	ASTM A193 Grade B7	635	685	700	750	805	870	985	970	1,140	1,065	
1/2	2-3/16	ASTM A36	1,490	1,195	1,635	1,195	1,885	1,195	2,310	1,195	2,665	1,195

Tension and Shear Factored Design Strength for Snake+ in Uncracked Concrete

ICIISIO	ension and shear ractored besign strength for shake+ in officiative contrete											
		Steel	Minimum Concrete Compressive Strength, f'c (psi)									
Nominal	Nominal	Insert	2,5	500	3,0	000	4,0	000	6,0	000	8,0	000
Anchor Embed. Size h, Element (Threaded Rod or Bolt)	φΝ, Tension (lbs.)	φV _n Shear (lbs.)	φΝ, Tension (lbs.)	φV _n Shear (lbs.)	φΝ, Tension (lbs.)	φV _n Shear (lbs.)	φΝ, Tension (lbs.)	φV _n Shear (lbs.)	φΝ, Tension (lbs.)	φV _n Shear (lbs.)		
210	1.50	ASTM A36	900	500	985	500	1,140	500	1,395	500	1,160	500
	ASTM A193 Grade B7	900	970	985	1,060	1,140	1,080	1,395	1,080	1,160	1,080	
1/2	2-3/16	ASTM A36	1,865	1,195	2,040	1,195	2,355	1,195	2,885	1,195	3,335	1,195

Anchor Pullout/Pryout Strength Controls	Concrete Breakout Strength Controls	Steel Strength Controls

ORDERING INFORMATION

Carbon Steel Snake+ Screw Anchor

Cat. No.	Anchor Size	Nominal Embedment	Internal Thread Depth	Std. Box	Std. Ctn.
6400SD	1/4"	1-5/8"	11/32"	100	1,000
6401SD	3/8"	1-5/8"	11/16"	50	500
6403SD	1/2"	2-1/2"	15/16"	50	300

Setting Tool for Snake+ Screw Anchor

Cat. No.	Driver	Anchor Size	Std. Box
6402SD	1/2" Square	1/4"	1
6407SD	1/2" Square	3/8"	1
6404SD	1/2" Square	1/2"	1





POWERS FASTENERS BRANCH INFORMATION

USA LOCATIONS				_
CITY	ADDRESS	CONTACT	PHONE	FAX
Alabama	5405 Buford Hwy Suite 410 Norcross, GA 30071-3984	Jeff Hatchett	205-520-6044	678-966-9242
Atlanta	5405 Buford Hwy Suite 410 Norcross, GA 30071-3984	Ryan Raica	678-966-0000	678-966-9242
Boston	2 Powers Lane, Brewster, NY 10509	Jack Armour	800-524-3244	914-576-6483
Charlotte	349 L West Tremont Avenue, Charlotte, NC 28203	Bob Aurisy	704-375-5012	704-376-5517
Chicago	2472 Wisconsin Avenue, Downers Grove, IL 60515	Dan Gilligan	630-960-3156	630-960-3912
Dallas	1300 IH 35 North, Suite #118, Carrollton TX 75006	Matt Henderson	972-506-9258	972-506-9290
Denver	2475 West Second Street #35, Denver, CO 80223	Jared Hemmert	303-922-9202	303-922-9228
Detroit	21600 Wyoming Avenue, Oak Park, MI 48237	Glen Gaskill	248-543-8600	248-543-8601
Florida	2412 Lynx Lane, Orlando, FL 32804	John Christy	813-626-4500	813-626-4545
Houston	13833 North Promenade, Suite 100, Stafford, TX 77477	Vaughn Eshelman	281-491-0351	281-491-0367
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	Trevor Gillespie	714-731-2500	714-731-2566
Maryland	3137-B Pennsy Drive, Landover, MD 20785	Chris Van Syckle	301-773-1722	301-341-5119
Milwaukee	12020 W. Feerick Street, Milwaukee, WI 53222	Donn Raduenz	414-466-2400	414-466-3993
Minneapolis	351 Wilson Street, NE Minneapolis, MN 55413	Josh Nelson	612-331-3770	612-331-3549
Nashville/Memphis	221 Blanton Avenue, Nashville, TN 37210	Jamie Utley	615-248-2667	615-248-2676
New Orleans	102 Sampson Street, Houston, TX 77003	Cal Zenor	713- <mark>228-1</mark> 524	713-228-1528
New York	2 Powers Lane, Brewster, NY 10509	John Partridge	914-235-6300	914-576-6483
Philadelphia	2 Powers Lane, Brewster, NY 10509	Greg Stephenson	800-524-3244	914-576-6483
Phoenix	3602 E. Southern Ave, Suite 5 Phoenix, AZ 85040	Patrick Stysly	602-431-8024	602-431-8027
Pittsburgh	1360 Island Avenue, Mckees Rocks, PA 15136	Bill Dugan	412-771-3010	412-771-9858
Portland	18808 142nd Ave NE, Suite 4A, Woodinville, WA 98072	Jim Swink	360-608-6845	206-762-5817
Rochester	36 Van Auker Blvd., Rochester, NY 14608	Mark Harper	800-524-3244 / 585-529-4188	914-576-6483/ 585-529-5319
Salt Lake City	3120 W. California Ave, Suite E, Salt Lake City, UT 84104	Don Manning	801-466-9428	801-466-3083
San Francisco	28970 Hopkins Street, Suite B+C, Hayward, CA 94545	John O'Brien/Craig Heri	ng 510-293-1500	510-293-1505
Seattle	18808 142nd Ave NE, Suite 4A, Woodinville, WA 98072	Darin Arnold/Jim Swink	206-762-5812	206-762-5817

INTERNATIONAL LOCATIONS

ADDRESS	CONTACT	PHONE	FAX
Factory 3, 205 Abbotts Road, Dandenong, South Victoria 3175	Peter Pratis	+61 3 8787 5888	+61 3 8787 5899
6950 Edwards Blvd. Mississauga, Ontario L5T 2W2	Mark Russell	905-673-7295	905-673-6490
Metropolitan Business Centre, East Nandan Road, Lane 300, No. 9, Room 604	Jake Olsen	+86-21-3363-2880	+86-21-5080-5389
Xuhui District, Shanghai, China 200030			
Westrak 208, 1771 SV Wieringerwerf, Netherlands	Colin Earl	+31 888 769 377	+31 227 594 759
1810 Dublin Avenue Man. Winnipeg, R3H 0H3	Distributor	204-633-0064	204-694-1261
PO Box 302 076 North Harbour Auckland	Clay Sesto	+64 9415 2425	+64 9415 2627
721 Meloche Avenue, Dorval, Quebec H9P 2S5	Allan Hill	514-631-4216	514-631-2583
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