O.E.M. HARDWARE

SIMPSON Strong-Tie CONNECTORS

GENERAL INFORMATION

There are many choices for anchoring into concrete, masonry and stone. It is often difficult to know which anchor is best suited for the application. In some cases, there may be more than one type that will work equally well. The following is meant as a guide to help identify the anchor best suited for the specific application.

There are three main criteria to be considered in anchor selection:

- The type of material to be anchored into
- Load capacity
- Type of load: static or dynamic

Base Materials

Base material is the generic industry term referring to the material being anchored into. Base material can be concrete, brick, concrete block, tile block, any other cementitious based substrate or stone.

The base material will determine the type of fastener for the application. Generally, solid base materials like concrete and stone have the greatest load carrying ability due to both the strength of the material and its mass. Hollow base materials have much less mass to anchor into and thus do not provide the strength of concrete.

The most common type of base material where adhesive bonded and mechanical anchors are used is structural concrete.

Structural concrete can be cast in place or precast concrete. Concrete has excellent compressive strength, but has relatively low tensile strength.

Cast in place (or sometimes called poured in place) concrete is poured in forms erected on the building site. Cast in place concrete can be either normal weight or lightweight concrete. Lightweight concrete is specified when it is desirable to reduce the weight of the building structure. Lightweight concrete differs from normal weight concrete by the weight of aggregate used in the mixture. Normal weight concrete has a mixture weight of 150 pounds per cubic foot compared to 70 to 115 pounds per cubic foot for lightweight concrete.

Prefabricated concrete panels are referred to as precast concrete. Precast concrete can be made at a prefabricating plant or site-cast in forms constructed on the job. Precast concrete can be solid or contain hollow cores. Many precast components have thinner cross sections than cast in place concrete. Precast concrete may be either normal weight or lightweight concrete.

Structural concrete contains steel bars, cable, wire mesh or random glass fiber for reinforcement. The addition of reinforcing material enables concrete to better resist tension forces.

The compressive strength of concrete varies according to the proportions of the components in the mixture. The desired compression strength of the concrete will be specified according to the application. Water content of the mix is the main determinant of the compression strength. The compressive strength of concrete can range from 2,000 psi to 20,000+ psi, depending on the mixture and how it is cured. Most concrete is mixed to attain its desired properties within 28 days after being cast.

Concrete Block (CMU)— Block typically is cast with large cores. Block with a minimum 75% solid cross section is called solid block even though it contains hollow cores. In many parts of the country building codes require reinforcing rods to be placed through the hollow cores, and the cores to be filled with grout.

In some areas of the eastern United States, past practice was to mix concrete with coal cinders to make cinder blocks. Although cinder blocks are no longer made, there are many existing buildings where they can be found. Cinder blocks require special attention as they soften with age.

Brick—Clay brick is made solid or with hollow cores. The use of either type will vary in different parts of the United States. Brick can be difficult to drill and anchor into. Most brick is hard and brittle. Old, red clay brick is often very soft and is easily over-drilled. Both of these situations can pose problems in drilling and anchoring.

The most common use of brick today is for building facades (curtain wall or brick veneer) and not for structural applications. Brick facade is attached to the structure by use of brick ties spaced at intervals throughout the wall.

In older brick buildings, multiple widths, or wythes of solid brick were used to form the structural walls. Three and four wythe walls were common methods of construction.

Clay Tile—Clay tile block is formed with hollow cores and narrow cavity wall cross sections. Clay tile is very brittle, making drilling difficult without breaking the block. Caution must be used in attempting to drill and fasten into clay tile.

It is always recommended to thoroughly evaluate the condition of the base material before attempting to select an anchoring system.

Values listed for Simpson Anchoring Systems products are for base materials with known compression strengths. When the strength of the base material is not known, or its holding ability is questionable, it is always recommended to do testing to be sure the required load values can be obtained.

Design Criteria

Many factors influence the load capabilities of mechanical anchors and chemical anchors installed in concrete or masonry, including:

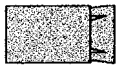
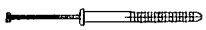
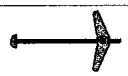
1. Anchor Spacing—the distance between anchors measured centerline to centerline.
2. Edge Distance—the distance from the centerline of an anchor to the nearest edge of concrete or masonry.
3. Base Material Compressive Strength—f'_c, f'_m
4. Hole Sizing—Relationship between the hole diameter and the anchor size.
5. Anchor Diameter
6. Embedment Depth—the distance from the surface of the structural member to the embedded end of the anchor.

Anchor Spacing

Spacing and edge distances listed for products in this catalog have been determined by testing under controlled conditions. For proper selection of the correct spacing and/or edge distances, consult the appropriate product data table. Where multiple anchors are used to support a load, the capacity of the anchor group is calculated as the product of the number of anchors within the group and the lowest (minimum) tension (or shear) value for a single anchor within the group. At the critical anchor spacing, the efficiency of each anchor is 100%. As anchors are spaced closer than the critical spacing, their efficiency is reduced and their capacities diminish linearly. Spacing may not be less than the minimum spacing.

SIMPSON Strong-Tie CONNECTORS

ANCHOR SELECTION GUIDE

	BASE MATERIAL					ALLOWABLE TENSION LOAD			Code Recognized
	Concrete	Grout-filled Concrete Block	Hollow Concrete Block	Solid Brick	Hollow Brick	500 lbs or Less	500 to 2000 lbs	2000 lbs or Greater	
Epoxy-Tie™ 	●	●	●	●	●		●	•	ICBO; SBCCI; City of L.A.; various DOT
Wedge-All™ 	●	●				•	•	•	ICBO; SBCCI; City of L.A.; Underwriters Laboratories; Factory Mutual; Dade County
Sleeve-All™ 	●	●	●	●	●	•	•		ICBO; City of L.A.; Underwriters Laboratories; Factory Mutual; Dade County
Easy-Set Expansion Anchor 	●	•				•	•	•	
Drop-In 	●					●	•	•	ICBO; City of L.A.; Underwriters Laboratories; Factory Mutual; Dade County; various DOT
Expansion Screw Anchor 	●	●		●		•	•		
Machine Screw Anchor 	●	●		●		●	●		
Lag Screw Expansion Shield 	●	●	●	•	•	•	•		
Leadwood Screw Anchor 	●	•	•	•	•	•			
Titen Masonry Screw 	●	●	●	●	●	●	●		
CSD 	●	•				•			
Plastic Screw Anchor 	●	●	●	●	●				
Vinyl Screw Anchor 	●	●	●	●	●				
Nailon™ 	●	●	●	•	•	•			
Spring Wing Toggle Bolt 	BASE MATERIAL Plywood and Gypsum Drywall		●		●				
Sure Wall 									
Nylon Toggle 			●	•	•				
Hollow Wall Anchors 			●		●				

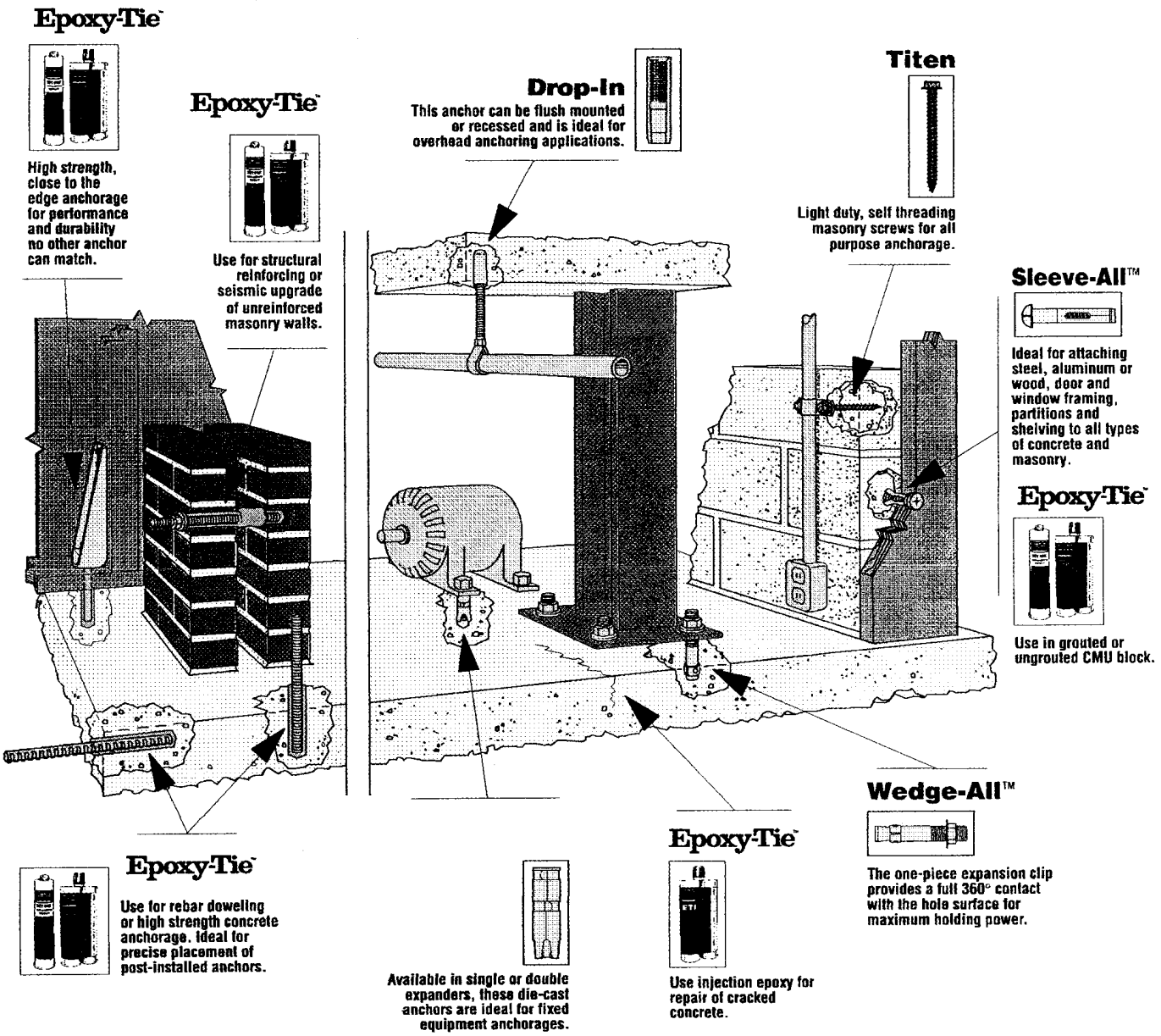
Catalog C-SAS98-2 © Copyright 1998 SIMPSON STRONG-TIE COMPANY, INC.

O.E.M. HARDWARE

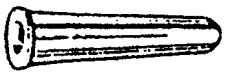
ANCHOR SELECTION GUIDE

SIMPSON Strong-Tie CONNECTORS

This diagram illustrates just a few of the many potential applications of the Simpson Anchoring Systems line.



Catalog C-SAS98-2 © Copyright 1998 SIMPSON STRONG-TIE COMPANY, INC.



PSA PLASTIC SCREW ANCHORS

The **Plastic Screw Anchor** is an expanding plastic shield that expands as the screw is tightened. The PSA can be used in all types of base material including gypsum drywall.

SIZE	DRILL	100 PAK PART No.	500 PAK PART No.	BULK QTY.	BULK PART No.
6-8 X 3/4	3/16	791-315	791-327	25 M	791-339
8-10 X 7/8	3/16	791-316	791-328	20 M	791-340
10-12 X 1	1/4	791-317	791-329	20 M	791-341
14-16 X 1 3/8	5/16	791-318	791-330	5 M	791-342

INSTALLATION:
- Drill a hole using the specified carbide drill bit in the table. The drilled hole should be 1/8" deeper than anchor length for flush mounting.
- Blow the hole clean using compressed air.
- Insert anchor into hole. Tap with hammer until flush with surface of base material.
- Position fixture; insert screw and tighten.

SURE WALL DRYWALL ANCHORS

The **Sure Wall Anchor** can be used as a one or two-step anchor for anchoring into low strength, or hollow base materials. The point cuts a hole through the base material, eliminating wall break-out as the anchor penetrates through hollow materials. In fixtures with sufficiently large holes, the Sure Wall can be used separately. For small holes, sheet metal screws can be inserted into the Sure Wall anchor body.

SIZE	BOX QTY.	CODE	PART No.
6 - 8 NYLON	100	SWN06	794-089
8 - 10 NYLON	100	SWN08L	794-090
6 - 8 ZINC	100	SWZ06	794-092
8 - 10 ZINC	100	SWZ08L	794-091

INSTALLATION:
- With the screwdriver inserted in the anchor, push the point of the Sure Wall anchor in the base material.
- Turning anchor clockwise, screw into wall until head is flush with the wall.
- Hold fixture in place and install self tapping screw.

(Screws aren't needed when hole in fixture accepts the Sure Wall anchor.)

LWSA LEAD WOOD SCREW ANCHORS

Leadwood Screw Anchor is a single piece lead anchor that can be used with wood screws or smaller diameter lag screws. The malleable shell works well for anchoring into aged brick, block and mortar.

INSTALLATION:
- Drill a hole using the specified carbide tipped bit in the table. The drilled hole should be 1/8" deeper than anchor length for flush mounting.
- Blow the hole clean using compressed air.
- Insert anchor into hole. Tap with hammer until flush with surface of base material.
- Position fixture; insert screw and tighten.

SIZE	DRILL	BOX QTY.	CODE	PART No.
6-8 X 3/4	1/4	100	LWSA06034	6034
6-8 X 1	1/4	100	LWSA06100	6100
6-8 X 1 1/2	1/4	100	LWSA06112	6112
10-14 X 1	5/16	100	LWSA10100	10100
10-14 X 1 1/2	5/16	100	LWSA10112	10112
16-18 X 1	3/8	100	LWSA31100	31100
16-18 X 1 1/2	3/8	100	LWSA31112	31112

SWTB SPRING WING TOGGLE BOLTS

SIZE	DRILL	BOX QTY.	CODE	PART No.
1/8 X 2	3/8	100	SWTB12200R	12200
1/8 X 3	3/8	100	SWTB12300R	12300
1/8 X 4	3/8	100	SWTB12400R	12400
3/16 X 2	1/2	50	SWTB18200R	18200
3/16 X 3	1/2	50	SWTB18300R	18300
3/16 X 4	1/2	50	SWTB18400R	18400
3/16 X 5	1/2	50	SWTB18500R	18500
3/16 X 6	1/2	50	SWTB18600R	18600
1/4 X 3	11/16	50	SWTB25300R	25300
1/4 X 4	11/16	50	SWTB25400R	25400
1/4 X 5	11/16	50	SWTB25500R	25500
1/4 X 6	11/16	50	SWTB25600R	25600
5/16 X 3	7/8	25	SWTB31300R	31300
5/16 X 4	7/8	25	SWTB31400R	31401
5/16 X 5	7/8	25	SWTB31500R	31500
5/16 X 6	7/8	25	SWTB31600R	31600
3/8 X 3	1	25	SWTB37300R	37300
3/8 X 4	1	25	SWTB37400R	37400
3/8 X 5	1	25	SWTB37500R	37500
3/8 X 6	1	25	SWTB37600R	37600

Spring Wing Toggle Bolts provide a large bearing area to distribute the load.

INSTALLATION:
- Drill hole using required diameter bit.
- Insert screw through fixture; thread screw onto toggle wing.
- Push toggle wing through drilled hole and tighten.

TOGGLE HEADS ONLY

SIZE	DRILL	BOX QTY.	PART No.	SIZE	DRILL	BOX QTY.	PART No.
1/8 - 6-32	3/8	100	71600	5/16 - 18	7/8	50	71636
3/16 - 10-24	1/2	100	71610	3/8 - 16	1	50	71646
1/4 - 20	11/16	100	71620	1/2 - 13	1 1/4	25	71657

NT NYLON TOGGLER

SIZE	DRILL	BOX QTY.	CODE	PART No.
3/8 SHORT/*COURT*	3/8	100	NT38	791-269
1/2 MEDIUM/*MEDIUM*	3/8	100	NT50	791-270
5/8 LONG/*LONG*	3/8	100	NT62	791-271

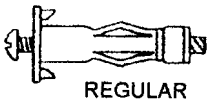
The **Nylon Toggle** is a versatile, light duty anchor for either hollow or solid base material applications. The unique design allows it to work as a toggle or insert. The nylon construction makes it ideal for use in applications subject to corrosion.
FEATURES: Corrosion resistant. Expands against the hole in solid walls or springs open into a toggle in hollow walls. Flutes prevent the anchor from spinning when installing screws.

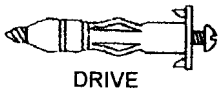
INSTALLATION Hollow wall:
- Drill through wall using recommended diameter bit.
- Install anchor into hole.
- Open the toggle by using supplied tool or position fixture and insert screw.

INSTALLATION Solid wall:
- Drill into wall using recommended diameter bit.
- Install anchor into hole.
- Position fixture and insert screw.

HWA *HOLLOW WALL ANCHORS*

Hollow Wall Anchors expand inside the wall cavity to provide a large bearing area for distribution of loads. Drive type Hollow Wall Anchor which permits installation in gypsum drywall without drilling.


REGULAR

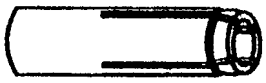

DRIVE

SIZE	DRILL	BOX QTY.	CODE	PART No.
1/8 XS	5/16	100	HWA12XS	796-053
1/8 S	1/4	100	HWA12S	796-056
1/8 L	1/4	100	HWA12L	796-059
3/16 S	3/8	50	HWA18S	796-062
3/16 L	3/8	50	HWA18L	796-068
1/4 S	1/2	50	HWA25S	796-071
1/4 L	1/2	50	HWA25L	796-077
1/8 SHORT/COURT	DRIVE TYPE	100	HWDA12SD	796-079
1/8 LONG/LONG	DRIVE TYPE	100	HWDA12LD	796-080

INSTALLATION HWA:
- Drill hole using required diameter bit.
- Tap anchor into hole until flush with surface.
- Tighten screw to set anchor.
- Remove screw, install through fixture; reinsert screw and tighten.

INSTALLATION HWDA:
- Drive anchor into gypsum drywall until head is flush with surface.
- Tighten screw to set anchor.
- Remove screw, install through fixture; reinsert screw and tighten.

DROP-IN *INTERNALLY THREADED EXPANSION SHELL ANCHORS*



Drop-in Anchors are internally threaded expansion anchors with a pre-assembled expander plug, suitable for flush mount applications in solid base material. The anchor is set by driving the expansion plug to the bottom of the anchor using the setting tool.

SIZE	DRILL	BOX QTY.	CODE	PART No.
1/4-20 UNC	3/8	100	DIA25	796-030
3/8-16 UNC	1/2	50	DIA37	796-031
1/2-13 UNC	5/8	50	DIA50	796-032
5/8-11 UNC	7/8	25	DIA62	796-033
3/4-10 UNC	1	20	DIA75	796-034

INSTALLATION:
- Drill a hole using a carbide tipped bit the diameter recommended from the table. The drilled hole should be 1/8" deeper than anchor length for flush mounting.
- Blow the hole clean using compressed air.
- Insert anchor into hole. Tap with hammer until flush against surface.
- Using the Drop-in setting tool, drive expander plug to the bottom of the anchor.

DROP-IN *SETTING TOOL*

SIZE	QTY.	CODE	PART No.
1/4	1	DIAST25	796-035
3/8	1	DIAST37	796-036
1/2	1	DIAST50	796-037
5/8	1	DIAST62	796-038
3/4	1	DIAST75	796-039

LSES *LAG SCREW EXPANSION SHIELD*

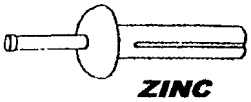
SIZE	DRILL	BOX QTY.	CODE	PART No.
1/4 SHORT/COURT	1/2	100	LSES25S	796-081
5/16 SHORT/COURT	1/2	100	LSES31S	796-082
3/8 SHORT/COURT	5/8	50	LSES37S	796-083
1/2 SHORT/COURT	3/4	25	LSES50S	796-084
1/4 LONG/LONG	1/2	50	LSES25L	796-085
5/16 LONG/LONG	1/2	50	LSES31L	796-086
3/8 LONG/LONG	5/8	50	LSES37L	796-087
1/2 LONG/LONG	3/4	25	LSES50L	796-088

Lag Screw Expansion Shield is a die cast zinc alloy expansion shield for anchoring lag screws in a variety of base materials, especially into block, brick and mortar joints. Radial rings provide additional holding power in softer material.

INSTALLATION:

- Drill a hole using the specified carbide tipped bit in the table. The drilled hole should be 1/8" deeper than anchor length for flush mounting.
- Blow the hole clean using compressed air.
- Insert anchor into hole. Tap with hammer until flush with surface of base material.
- Position fixture; insert screw and tighten.

NAILON™ *PIN DRIVE ANCHORS*



ZINC

SIZE	DRILL	BOX QTY.	CODE	PART No.
3/16 X 7/8	3/16	100	ZN18078	791-360
1/4 X 1	1/4	100	ZN25100	791-361
1/4 X 1 1/4	1/4	100	ZN25114	791-362
1/4 X 1 1/2	1/4	100	ZN25112	791-363
1/4 X 2	1/4	100	ZN25200	791-364

Zinc Nailon is a low cost, easily installed anchor for light duty applications under static loads.

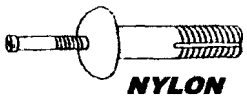
SPECIAL FEATURE: The pin and head configuration make this anchor tamper-proof.

INSTALLATION:

- Drill hole the same diameter as nailon using a carbide tipped bit.
- Blow the hole clean using compressed air.
- Position fixture, insert Nailon.
- Tap with hammer until flush with fixture; drive pin until flush with top of head.

NAILON™ *PIN DRIVE ANCHORS*

ROUND HEAD / *TETE RONDE*



NYLON

SIZE	DRILL	BOX QTY.	CODE	PART No.
3/16 X 1	3/16	100	N18100R	791-365
3/16 X 1 1/2	3/16	100	N18112R	791-366
1/4 X 1	1/4	100	N25100R	791-367
1/4 X 1 1/2	1/4	100	N25112R	791-368
1/4 X 2	1/4	100	N25200R	791-369

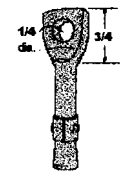
Nylon Nailon is a low cost anchor for light duty applications under static loads.

SPECIAL FEATURE: The nylon shell acts as an insulator when used in electrical applications.

INSTALLATION:

- Drill hole the same diameter as nailon using a carbide tipped bit.
- Blow the hole clean using compressed air.
- Position fixture, insert Nailon.
- Tap with hammer until flush with fixture; drive pin until flush with top of head.

TIE-WIRE ANCHORS



ZINC ONLY

SIZE	BOX QTY.	CODE	PART No.	BULK QTY.	CODE	PART No.
1/4 X 1 1/2	100	TWD25112	25112	2000	TWD25112B	25112B

WEDGE-ALL™ WEDGE ANCHORS

The **Wedge-All** is a non bottom bearing, wedge style expansion anchor for use in solid concrete or grout filled masonry. A one-piece clip ensures uniform holding capacity that increases as tension is applied. A threaded stud version is available in nine diameters and several lengths. A single size tie-wire version is available for wire supported fixtures. Threaded studs are set by tightening the nut. Tie-wire anchors are set with the claw end of a hammer.

SPECIAL FEATURES: One piece wrap around clip. Threaded end is camphered for ease of starting nut.

INSTALLATION:

- Hole in steel or metal fixtures to be mounted should exceed anchor diameter by 1/16" for 1/4" thru 5/8" diameter bolts, and 1/8" or all other diameters.
- Drill a hole in the base material using a carbide tipped bit the same diameter as the anchor to be installed. The hole should be at least 1/2" deeper than the embedment required.
- Blow the hole clean using compressed air.
- Assemble the anchor with nut and washer so the top of the nut is flush with the top of the anchor. Place the anchor in the fixture and drive into the hole until washer and nut are tight against fixture.
- Tighten nut finger tight. Tighten to required torque setting.

SIZE	BOX QTY.	CODE	PART No.
1/4 x 1 3/4	100	WA25134	25134W
1/4 x 2 1/4	100	WA25214	25214W
1/4 x 3 1/4	100	WA25314	25314W
3/8 x 2 1/4	50	WA37214	37214W
3/8 x 2 3/4	50	WA37234	37234W
3/8 x 3	50	WA37300	37300W
3/8 x 3 3/4	50	WA37334	37334W
3/8 x 5	50	WA37500	37500W
1/2 x 2 3/4	25	WA50234	50234W
1/2 x 3 3/4	25	WA50334	50334W
1/2 x 4 1/4	25	WA50414	50414W
1/2 x 5 1/2	25	WA50512	50512W
1/2 x 7	25	WA50700	50700W
5/8 x 3 1/2	20	WA62312	62312W
5/8 x 4 1/2	20	WA62412	62412W
5/8 x 5	20	WA62500	62500W
5/8 x 6	20	WA62600	62600W
5/8 x 7	20	WA62700	62700W
5/8 x 8 1/2	20	WA62812	62812W
3/4 x 4 1/4	10	WA75414	75414W
3/4 x 4 3/4	10	WA75434	75434W
3/4 x 5 1/2	10	WA75512	75512W
3/4 x 6 1/4	10	WA75614	75614W
3/4 x 7	10	WA75700	75700W
3/4 x 8 1/2	10	WA75812	75812W
3/4 x 10	10	WA75100	75100W
1 x 6	5	WA16000	16000W
1 x 9	5	WA19000	19000W
1 x 12	5	WA11200	11200W
1 1/4 x 9	5	WA12590	12590W
1 1/4 x 12	5	WA12512	12512W
STAINLESS STEEL			
3/8 x 2 3/4	50	WA37234SS	37234SS
3/8 x 3 3/4	50	WA37334SS	37334SS
1/2 x 2 3/4	25	WA50234SS	50234SS
1/2 x 3 3/4	25	WA50334SS	50334SS

SLEEVE-ALL™ *SLEEVE ANCHORS*

SIZE	DRILL	HEAD STYLE	BOX QTY.	CODE	PART No.
1/4 X 1 3/8	1/4	ACORN	100	SL25138A	25138A
1/4 X 2	1/4	FLAT	100	SL25200F	25200F
5/16 X 1 1/2	5/16	HEX	100	SL31112H	31112H
5/16 X 2 1/2	5/16	HEX	50	SL31212H	31212H
3/8 X 1 7/8	3/8	HEX	50	SL37178H	37178H
3/8 X 3	3/8	HEX	50	SL37300H	37300H
3/8 X 4	3/8	HEX	50	SL37400H	37400H
3/8 X 4	3/8	FLAT	50	SL37400F	37400F
3/8 X 5	3/8	FLAT	50	SL37500F	37500F
3/8 X 6	3/8	FLAT	50	SL37600F	37600F
1/2 X 2 1/4	1/2	HEX	50	SL50214H	50214H
1/2 X 3	1/2	HEX	25	SL50300H	50300H
1/2 X 4	1/2	HEX	25	SL50400H	50400H
1/2 X 6	1/2	HEX	20	SL50600H	50600H
5/8 X 2 1/4	5/8	HEX	25	SL62214H	62214H
5/8 X 4 1/4	5/8	HEX	10	SL62414H	62414H
5/8 X 6	5/8	HEX	10	SL62600H	62600H
3/4 X 2 1/2	3/4	HEX	10	SL75212H	75212H
3/4 X 4 1/4	3/4	HEX	10	SL75414H	75414H
3/4 X 6 1/4	3/4	HEX	5	SL75614H	75614H
STAINLESS STEEL					
3/8 X 1 7/8	3/8	HEX	50	50900	50901
3/8 X 3	3/8	HEX	50	50900	50902

Sleeve-Alls are pre-assembled expanding sleeve anchors for use in all types of hollow and solid base materials. These anchors are available in acorn, hex, rod coupler, flat or round head styles for a wide range of applications.


ACORN


HEX


FLAT

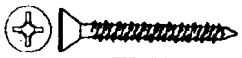
INSTALLATION:
- Drill a hole in the base material using a carbide tipped bit the same diameter as the anchor to be installed. The hole should be at least 1/2" deeper than the embedment required. For installations in hollow CMU and brick, the drill should be set on rotation only.
- Blow the hole clean using compressed air.
- Place the anchor in the fixture and drive into the hole until the washer and nut are tight against fixture.
- Tighten nut finger tight. Tighten to required torque setting, or 3 to 5 turns from the finger tight position.

EZA *EASY-SET EXPANSION ANCHORS*

SIZE	MIN. THRD. LENGTH	BOX QTY.	CODE	PART No.
1/4 X 1 3/4	5/8			
1/4 X 2 3/8	3/4	100	EZA25238	25238
3/8 X 2 3/8	1	50	EZA37238	37238
3/8 X 3 1/2	1 1/8	50	EZA37312	37312
3/8 X 4 3/4	1 1/8	50	EZA37434	37434
1/2 X 3 1/2	1 1/8	25	EZA50312	50312
1/2 X 4 3/4	2	25	EZA50434	50314

The **EZA** is a non-bottom bearing anchor for medium and heavy duty fastening applications into concrete and grout filled block.

INSTALLATION:
- Hole in fixtures to be mounted must be at least the same diameter as anchor body.
- Drill a hole in the base material using a carbide-tipped drill bit the same diameter as the anchor to be installed. The hole should be at least 1" deeper than the embedment required.
- Blow the hole clean using compressed air.
- Adjust the nut for required embedment.
- Place the anchor through the fixture and into the hole.
- Drive the center pin until head is flush with top of anchor.



FLAT

TITEN™ MASONRY SCREW ANCHORS

SIZE	DRILL	BOX QTY.	CODE	PART No.
3/16 X 1 1/4	5/32	100	TTN18114PF	48500
3/16 X 1 3/4	5/32	100	TTN18134PF	48501
3/16 X 2 1/4	5/32	100	TTN18214PF	48502
3/16 X 2 3/4	5/32	100	TTN18234PF	48503
3/16 X 3 1/4	5/32	100	TTN18314PF	48504
3/16 X 3 3/4	5/32	100	TTN18334PF	48505
3/16 X 4	5/32	100	TTN18400PF	48506
1/4 X 1 1/4	3/16	100	TTN25114PF	48507
1/4 X 1 3/4	3/16	100	TTN25134PF	48508
1/4 X 2 1/4	3/16	100	TTN25214PF	48509
1/4 X 2 3/4	3/16	100	TTN25234PF	48510
1/4 X 3 1/4	3/16	100	TTN25314PF	48511
1/4 X 3 3/4	3/16	100	TTN25334PF	48512
1/4 X 4	3/16	100	TTN25400PF	48513

100 pk INCLUDES MASONRY DRILL BIT

HEX

TITEN™ MASONRY SCREW ANCHORS

SIZE	DRILL	BOX QTY.	CODE	PART No.
3/16 X 1 1/4	5/32	100	TTN18114H	48520
3/16 X 1 3/4	5/32	100	TTN18134H	48521
3/16 X 2 1/4	5/32	100	TTN18214H	48522
3/16 X 2 3/4	5/32	100	TTN18234H	48523
3/16 X 3 1/4	5/32	100	TTN18314H	48524
3/16 X 3 3/4	5/32	100	TTN18334H	48525
3/16 X 4	5/32	100	TTN18400H	48526
1/4 X 1 1/4	3/16	100	TTN25114H	48527
1/4 X 1 3/4	3/16	100	TTN25134H	48528
1/4 X 2 1/4	3/16	100	TTN25214H	48529
1/4 X 2 3/4	3/16	100	TTN25234H	48530
1/4 X 3 1/4	3/16	100	TTN25314H	48531
1/4 X 3 3/4	3/16	100	TTN25334H	48532
1/4 X 4	3/16	100	TTN25400H	48533

100 pk INCLUDES MASONRY DRILL BIT

Titen screws are 3/16" and 1/4" diameter masonry screws for attaching all types of components to concrete and masonry. Available in hex and phillips head designs. Use with appropriately sized Titen drill bits.

INSTALLATION:

- Drill hole using the appropriate Titen Drill Bit. The drilled hole should be 1/4" deeper than the anchor embedment.
- Blow the hole clean using compressed air.
- Position fixture, insert screw and tighten using drill and installation tool fitted with a hex socket or phillips bit.

MASONRY DRILL BITS

SIZE	USE WITH SCREW	LENGTH	PART No.
5/32 X 3 1/2	3/16 dia.	1 - 1-1/2	72431
5/32 X 4 1/2	3/16 dia.	2 - 3-1/4	72441
5/32 X 5 1/2	3/16 dia.	3-3/4 - 4	72451
3/16 X 3 1/2	1/4 dia.	1 - 1-1/2	72461
3/16 X 4 1/2	1/4 dia.	2 - 3-1/4	72471
3/16 X 5 1/2	1/4 dia.	3-3/4 - 4	72481

TITEN™ INSTALLATION TOOL KIT

CODE	QTY.	PART No.
TTNT01-RC	1	796-095

8 PIECE KIT INCLUDES:

- bit holder
- 5 3/4" sleeve
- allen wrench
- 1/4 & 5/16 hex socket
- phillips bit socket
- #2 & #3 phillips bits

CSD COUNTERSUNK SPLIT DRIVE ANCHORS

DRILL INCLUDED

SIZE		BOX QTY.	CODE	PART No.
1 1/2	Drill 1/4	100	CSD25112	796-060
2	Drill 1/4	100	CSD25200	796-061
2 1/2	Drill 1/4	100	CSD25212	796-063
3	Drill 1/4	100	CSD25300	796-064
3 1/2	Drill 1/4	100	CSD25312	796-066
4	Drill 1/4	100	CSD25400	796-067

The **Countersunk Split Drive Anchor** is a one piece anchor, pre-expanded on the working end. As the anchor is driven into the hole, the expanded area compresses and exerts force against the walls of the hole. Can be installed in concrete, grout filled block and stone.

INSTALLATION:

- Drill hole using required diameter carbide tipped bit.
- Blow the hole clean using compressed air.
- Position fixture and insert Split Drive through holes in fixture.
- Drive anchor until head is flush against fixture.

SET-KIT

Includes: 1.7 oz sbs cartridge, plunger and two mixing nozzles

SET HIGH STRENGTH EPOXY

SIZE	BOX QTY.	CODE	PART No.
SET-KIT	1	SET1.7KT	796-093
SET-PAC™	1	SETPAC10	796-094

SET-PAC™

Includes: 10fl oz/295 ml, single cartridge, two component epoxy. Use standard caulking tool

O.E.M HARDWARE

"Hard to Find Fasteners Our Specialty"™

#103-12779-80TH AVE. SURREY, B.C. V3W-3A6 PH.(604)591-1100 FAX (604)591-8133

SOLD TO: _____

_____

_____

_____

SHIP TO: _____

_____

_____

C.O.D	*PAGE #*	*#OF PAGES TO ORDER*	*ORDER DATE*

P.O.#	*BUYERS NAME*

ACCT.#	***PHONE #***

EMAIL ADDRESS	***FAX #***

P.S.T #	*AGENTS NAME*	*AGENT CODE*	*ZONE*

	ORDER	*PART #*	*DESCRIPTION*	*PRICE*	*PER*	*AMOUNT*
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						

☐ *TOTAL LINES*

☐ *New*

☐ *ESTABLISHED*

NO RETURN GOODS ACCEPTED WITHOUT WRITTEN PERMISSION. CLAIMS FOR SHORTAGES OR DAMAGED GOODS ONLY WITHIN 48 HOURS.

BUYER'S SIGNATURE X _____

NAME OF CARRIER.

SUBTOTAL	
G.S.T	
P.S.T	
SHIPPING	
TOTAL	

☐ *VISA* ☐ *MC* ***CARD#*** _____

CARD HOLDER _____ ***EXP.*** _____