

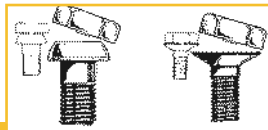
**SECURITY FASTENERS**

**SECURITY PRODUCTS**

# Break-Away Bolts & Pre-Cast Concrete Inserts

## Break-Away

Samson manufactures and distributes round and flat head Break-Away bolts in size range #10-24 through 3/4". Ideal for high security applications where removability is not required. Tamper-resistant head configuration will ward off the most determined attacks. Break-Away bolts are installed with standard wrenches to attach fixtures to internally threaded materials or inserts. Parts are made-to-order based on customer specifications including dimensions, material, finishes, and torque tightening requirements. Certain sizes are kept in stock. Please contact a Samson sales representative for further details.



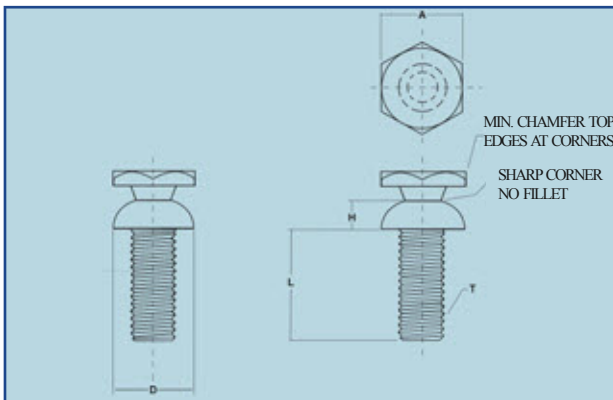
### Break-Away Bolts

Round & Flat Head

• Call for availability on both round and flat head

### Technical Data Round Head

INOMINAL SIZE (T)	HEX SIZE (A)	HEAD HEIGHT (H)	HEAD DIAMETER (D)	BREAK-OFF TORQUE (#11LBS)
3/8"-16	11/16"	0.250	0.680	25 - 29
1/2"-13	13/16"	0.330	0.790	42 - 45
5/8"-11	1"	0.430	0.930	59 - 68
3/4"-10	1-1/4"	0.480	1.240	145 - 155



1. Length of Bolt (L) to be specified by customer
  2. Material: AISI 12L14 Low Carbon Steel
  3. Typical Mechanical Properties (estimated)  
Tensile Strength (psi) 78,000 — Yield Strength (psi) 60,000
  4. Threading shall comply with AISI Standards, UNC-2A fit or as specified by customer
  5. Bolts to be fully threaded under head to clearance dimension, full body
  6. Finish: Commercial Zinc Clear Plating
- All dimensions in inches
  - Commercial tolerances apply to dimensions
  - Drawing above not to scale

## Pre-Cast Concrete Inserts

Concrete Inserts are designed to use in precast, prestressed or poured-in-place concrete. The zinc alloy body (Zamak 5) provides for maximum corrosion resistance and mar-free installations. The thick, solid anchor walls yield rock solid strength and durability. The die-cast threads offer superior strength compared to tap & die threads, and the wide base grips the concrete for superior anchor strength.

### Applications

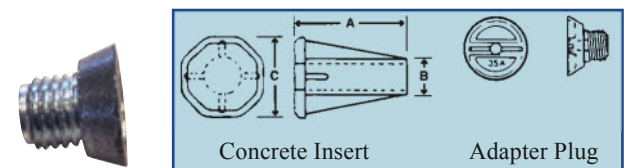
- Prison cells
- Burial vaults
- Utility poles
- Railings
- Machinery
- Benches



### Pre-Cast Concrete

ITEM CODE	ANCHOR SIZE	BOLT SIZE	A	B	C	TORQUE	500 LB LOAD
P10T	10-24 x 11/16"	#10-24	11/16"	3/16"	7/16"	10"/lbs.	850
P15T	1/4"x1-1/2"	1/4"-20	1-1/2"	1/4"	13/16"	2.66"/lbs.	5130
P24T	3/8" x 1"	3/8"-16	1"	3/8"	7/8"	10"/lbs.	2890
P25T	3/8" x 1-3/8"	3/8"-16	1-3/8"	3/8"	7/8"	8.33"/lbs.	4940
P35T	1/2" x 1-1/2"	1/2"-13	1-1/2"	1/2"	1-1/4"	19"/lbs.	6260
P36T	1/2" x 2-7/8"	1/2"-13	2-7/8"	1/2"	1-3/8"	19"/lbs.	13590
P45T	5/8"x1-11/16"	5/8"-11	1-11/16"	5/8"	1-3/8"	40"/lbs.	7970
P46T	5/8" x 2-7/8"	5/8"-11	2-7/8"	5/8"	1-9/16"	40"/lbs.	15410
P55T	3/4" x 1-11/16"	3/4"-10	1-11/16"	3/4"	1-9/16"	56"/lbs.	7850
P56T	3/4" x 2-7/8"	3/4"-10	3"	3/4"	1-3/4"	56"/lbs.	14930

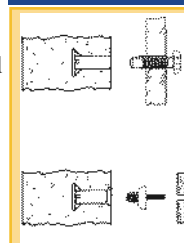
• Safe working load = 1/4 maximum test load



### Adapter Plugs Zinc

ITEM CODE	SIZE	ITEM CODE	SIZE
AP38	3/8"	AP12	1/2"
AP58	5/8"	AP34	3/4"

### Installation



Pre-cast Concrete Inserts can be secured directly to steel form with a standard machine screw or bolt, which is easily removed when form is stripped.

Pre-cast Concrete Inserts can also be easily secured to the wood form with one strong- hold nail. Pre-cast Adapter is easily removed after form is stripped.

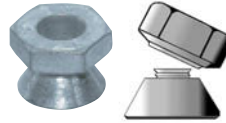
# Break-Away Nuts Tamper-Resistant

## Product Description

Break-Away nuts are designed to prevent unauthorized removal of and secure access to equipment and facilities. As with Trident nuts they are used extensively in correctional institutions, hospitals, schools, public places and retail stores to secure a variety of products.

Break-Away nuts are suitable for applications where removal of a fixture is not intended and when prevention of tampering is important. After tightening to the proper torque, the hex head breaks away leaving a conical shaped tamper resistant nut.

Break-Away nuts are manufactured from ZAMAK 5 zinc alloy and 304 stainless steel. Stainless steel offers greater corrosion resistance and high-strength properties compared to zinc alloy. The nuts are tapped to standard bolt dimensions and are also available tapped oversize for hot dip galvanized fasteners.



## Specifications

Break-Away nuts consist of a one-piece unit made from hardened ZAMAK 5 zinc alloy. The nut is designed that when tightening to the proper torque, the hex head will break away leaving a conical shaped tamper-resistant nut.

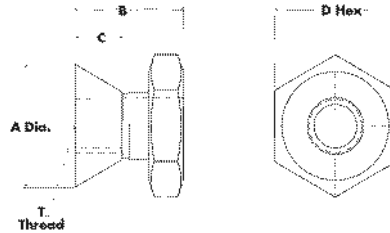
## Break-Away Nuts

### ZAMAK 5 Zinc Alloy

ITEM CODE	SIZE	HEX DRIVE	TORQUE GUIDE	BOX QTY.
BAW-1024Z	#10-24	7/16"	30-40 inch/lbs.	100
BAW-1420Z	1/4"-20	9/16"	50-60 inch/lbs.	100
BAW-3120Z	5/16"-18	5/8"	90-110 inch/lbs.	100
BAW-3750Z	3/8"-16	3/4"	140-150 inch/lbs.	100
BAW-5000Z	1/2"-13	1"	330-360 inch/lbs.	50
BAW-6250Z	5/8"-11	1-1/8"	330-360 inch/lbs.	25
BAW-M610Z	M6 x 1.0	9/16"	50-60 inch/lbs.	100
BAW-M8125Z	M8 x 1.25	5/8"	90-110 inch/lbs.	100
BAW-M1015Z	M10 x 1.5	3/4"	140-150 inch/lbs.	100
BAW-M12175Z	M12 x 1.75	1"	330-360 inch/lbs.	50

### 304 Stainless Steel

BAW-1420S	1/4"-20	9/16"	67-98 inch/lbs.	100
BAW-3120S	5/16"-18	5/8"	106-133 inch/lbs.	100
BAW-3750Z	3/8"-16	3/4"	230-248 inch/lbs.	100
BAW-5000Z	1/2"-13	1"	372-407 inch/lbs.	100
BAW-6250Z	5/8"-11	1-1/8"	460-513 inch/lbs.	50



## ZAMAK 5 (AC41A) Material Specifications

CHEMICAL COMPOSITION		MECHANICAL PROPERTIES	
Copper	0.75 - 1.25	Tensile Strength PSI	47,600
Aluminum	3.5 - 4.3	Yield Strength PSI (0.2% offset)	39,000
Magnesium	0.03 - 0.05	Compressive Strength PSI	87,000
Iron (max.)	0.1	Shear Strength PSI	38,000
Lead (max.)	0.005	Elongation % inch per inch	7.0
Cadmium (max.)	0.004	Hardness BHN	91
Tin (max.)	0.003	Impact Strength Ft. Lb.	48
Zinc (99.99%+)	Remainder		

\*Material Specifications applicable for both Trident and Break-Away nuts.

## Technical Data

T THREAD	A BOTTOM DIA. (MAX)	B OVERALL HEIGHT	C NUT HEIGHT	D HEX
#10-24	.4375	.390	.180	7/16"
1/4"-20	.5625	.470	.220	6"
5/16"-18	.6250	.500	.220	9/16"
3/8"-16	1.0000	.750	.350	5/8"
1/2"-13	1.1250	.800	.370	3/4"
5/8"-11	.5625	.470	.220	1"
M6 X 1.0	.6250	.500	.220	1-1/8"
M8 X 1.25	.7500	.580	.250	1-1/4"
1.25 M10	1.0000	.750	.350	9/16"

\*Above dimensions are in decimal inches.