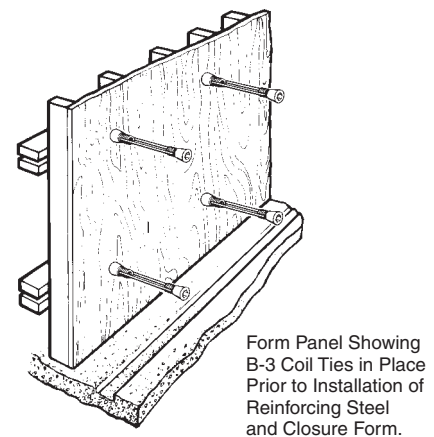
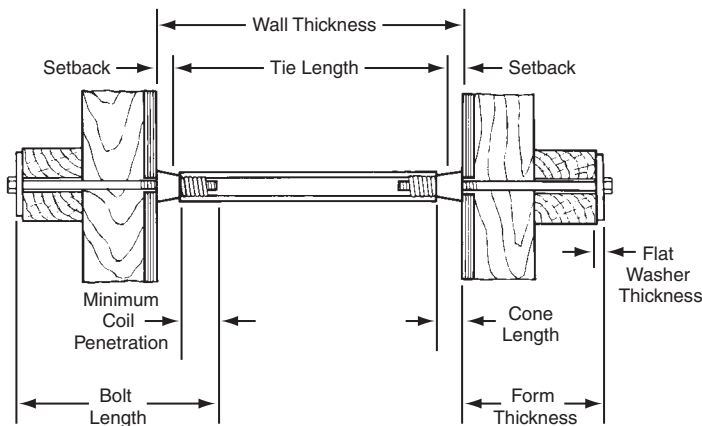
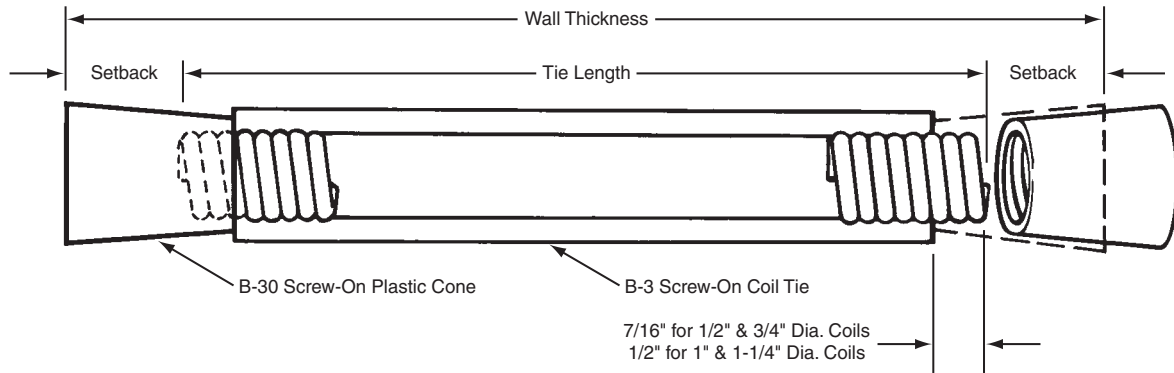


## B-3 Screw-On Coil Tie

Dayton Superior Screw-On Coil Tie is designed with longer coils that extend beyond the end of the struts. Plastic cones screw onto the projections to provide a positive setback and act as a fixed internal form spreader.

To determine proper screw-on coil tie length, subtract the required total setback (both sides) from the wall thickness.



B-3 Screw-On Coil Tie Selection Chart			
Type	Bolt Diameter	Number of Strut Wires	Safe Working Load Tension (lbs.)
B-3 Standard	1/2"	2	4,500
B-3 Heavy	1/2"	2	6,750
B-3 Extra Heavy	1/2"	2	9,000
B-3 Standard	3/4"	2	6,750
B-3 Heavy	3/4"	2	9,000
B-3 Standard	1"	2	13,500
B-3 Standard	1/2"	4	9,000
B-3 Standard	3/4"	4	18,000
B-3 Standard	1"	4	18,000
B-3 Heavy	1"	4	27,000
B-3 Standard	1-1/4"	4	27,000

SWL provides a factor of safety of approximately 2 to 1.  
**Warning:** See Page 62 for minimum bolt length.

### To Order:

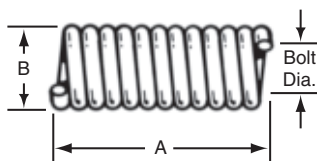
Specify: (1) quantity, (2) name, (3) safe working load, (4) bolt diameter, (5) tie length, (6) wall thickness, (7) setback.

### Example:

1,500 pcs. B-3 Screw-On Coil Tie, 6,750 lbs. SWL, 1/2" diameter, 22 long for a 24" wall, 1" setback.

## Coils

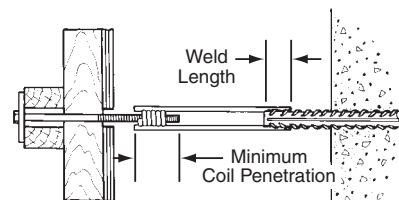
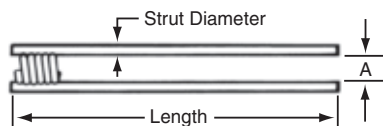
Standard coils are available for 1/2", 3/4", 1", 1-1/4" and 1-1/2" diameter bolts.



Coil Dimensions				
Bolt Diameter	A	B	Wire Diameter	Threads Per Inch
1/2"	1-1/8"	25/32"	.162"	6
3/4"	1-9/16"	1-3/32"	.218"	4-1/2
1"	2"	1-7/16"	.281"	3-1/2
1-1/4"	2"	1-11/16"	.281"	3-1/2
1-1/2"	2-5/16"	1-15/16"	.281"	3-1/2

## B-6 Welding Coil Tie

Dayton Superior B-6 Welding Coil Tie is manufactured with two struts welded to a coil at one end only. The opposite, open end of the tie is utilized for field welding. The B-6 tie is used effectively in heavy and special forming applications. Available in 1/2", 3/4" and 1" diameters. See related welding warning on inside front cover.



B-6 Welding Coil Tie Selection Chart						
Coil Bolt Diameter	Maximum SWL Tension (lbs.)	Wire Strut		Minimum Weld Length	A	Minimum Tie Length
		Diameter	AISI No.			
1/2"	3,750	.306"	1008	1"	3/4"	3"
3/4"	6,750	.375"	1018	1-1/2"	1"	4"
1"	13,500	.440"	1035	2"	1-3/8"	5"

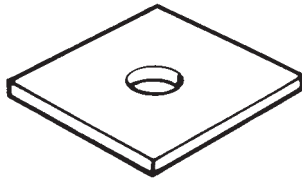
SWL provides a factor of safety of approximately 2 to 1 and is dependent on the field weld.  
**Warning:** See Page 62 for minimum bolt length.

### To Order:

Specify, (1) quantity, (2) name, (3) diameter, (4) length

## B-11 Flat Washers

Dayton Superior B-11 Flat Washers are made from flat steel plate and are available in the sizes shown in the accompanying chart. For best results the space spanned by the washer should not exceed the bolt diameter plus 1/4".



**B-11 Flat Washer**

**To Order:**

Specify: (1) quantity, (2) name, (3) bolt diameter.

**Example:**

1,200 pcs. B-11 Standard, 1/2" bolt.

B-11 Flat Washer Selection Chart			
Bolt Diameter	Type	Safe Working Load (lbs.)	Size
1/2"	Standard	6,750	3" x 4" x 1/4"
1/2"	Heavy	8,750	4" x 5" x 1/4"
3/4"	Standard	14,000	4" x 5" x 3/8"
3/4"	Heavy	14,000	5" x 5" x 3/8"
1"	Standard	18,500	5" x 5" x 1/2"
1"	Heavy	38,000	7" x 7" x 3/4"
1 1/4"	Standard	22,750	5" x 5" x 5/8"
1 1/4"	Heavy	50,750	7" x 7" x 3/4"
1 1/2"	Standard	26,250	5" x 5" x 3/4"
1 1/2"	Heavy	41,500	7" x 7" x 3/4"

SWL provides a factor of safety of approximately 2 to 1.

## B-12 Coil Rod

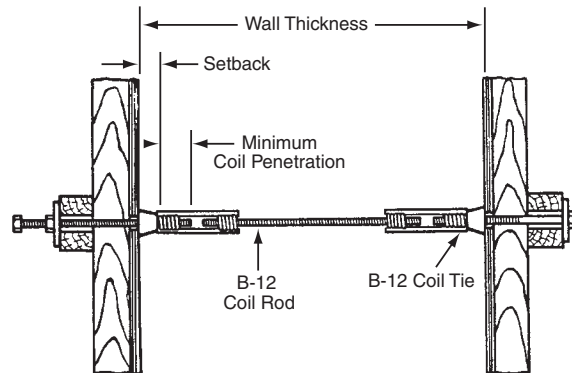
Dayton Superior B-12 Coil Rod is available in 1/2" to



**B-12 Coil Rod**

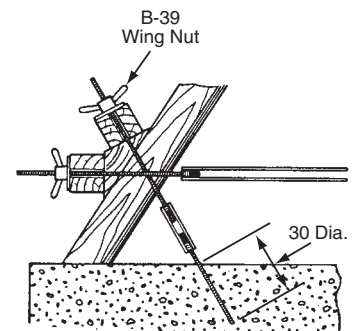
1-1/2" diameters in 12' lengths. Field cutting can be accomplished with bolt cutters or carborundum blades.

B-12 threaded rod can be used with Coil Ties in many forming combinations to tie formwork, for adjustable ties, for concrete embedments and/or emergency ties.



B-12 Coil Rod Selection Chart						
Coil Rod Diameter	Safe Working Loads		Minimum Root Area (sq. in.)	Tensile Stress (psi.)	Yield Stress (psi.)	Minimum Coil Penetration
	Tension (lbs.)	Shear (lbs.)				
1/2"	9,000	6,000	.1385	130,000	110,000	2"
5/8"	12,000	8,000	.2124	113,000	96,000	2-1/4"
3/4"	18,000	12,000	.3079	117,000	100,000	2-1/4"
7/8"	24,000	16,000	.4477	117,000	100,000	2-1/2"
1"	38,000	25,300	.5410	140,000	120,000	2-1/2"
1-1/8"	45,000	30,000	.7163	126,600	105,000	2-1/2"
1-1/4"	56,000	37,500	.9161	123,000	105,000	2-1/2"
1-1/2"	68,000	45,300	1.3892	98,000	85,000	3"

SWL provides a factor of safety of approximately 2 to 1.  
**Warning:** See Page 7 before using B-12 Coil Rod.



**To Order:**

Specify: (1) quantity, (2) name, (3) diameter, (4) length.

**Example:**

500 pcs. B-12 Coil Rod, 1" diameter x 12'-0" long.

## B-12-A D/R Thread Bar

Dayton Superior's D/R Thread Bar is a high strength, 5/8" and 7/8" ductile steel with a full length, cold-rolled contour thread. The bar's 2-1/2 threads per inch offers fast installation and stripping. D/R Thread Bar is available in 20'-0" standard lengths and can be cut to specific project requirements. Field cutting, with Carborundum blades, is easily accomplished without thread damage.



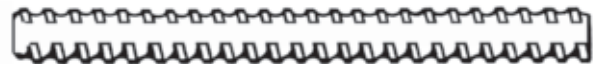
**B-12-A D/R Thread Bar**

**5/8" -20,000 lbs.  
7/8" - 32,000 lbs.  
Maximum Safe Working Load**

SWL provides a factor of safety of approximately 2 to 1.

## B-12-AD D/R Euro Thread Bar

The D/R Euro Thread Bar is a hot-rolled high strength steel with two flat sides in the thread pattern. This bar has been used in Europe on all types of projects for years. The flat sides provide self-cleaning and allow a gripping surface for turning the bar. Euro Thread Bar is available in both 15mm (5/8") and 20mm (7/8") diameters and is standard in 19'-8" lengths. Euro Thread Bar is bendable.



**B-12-AD D/R Euro Thread Bar**

**15 mm (5/8") -21,900 lbs.  
20 mm (7/8") - 39,200 lbs.  
Maximum Safe Working Load**

SWL provides a factor of safety of approximately 2 to 1.

## B-12-ACN Cast Hex Nut and B-12-ASN D/R Steel Hex Nut

5/8" and 7/8" hex nuts, in cast and steel versions, are available with 2-1/2 threads per inch to be used in conjunction with the appropriate DS Thread Bar.

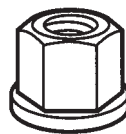
5/8" B-12-ACN - 10,000 lbs. Safe Working Load

7/8" B-12-ACN - 10,700 lbs. Safe Working Load

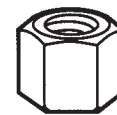
5/8" B-12-ASN - 12,500 lbs. Safe Working Load

7/8" B-12-ASN - 17,500 lbs. Safe Working Load

Double nuts are required to meet DS Thread Bar capacity.



**B-12-ACN  
Cast Hex Nut**



**B-12-ASN  
Steel Hex Nut**

## B-12-AW D/R Wing Nut and B-12-ASW D/R Swivel Wing Nut

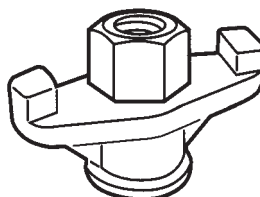
5/8" and 7/8" Wing Nut is a high strength malleable steel nut with 2-1/2 threads per inch for use with the DS Thread Bar. For added versatility, the Swivel Wing Nut features a heavy duty, ribbed washer base, reducing the number of loose working parts required.

5/8" B-12-AW - 21,900 lbs. Safe Working Load

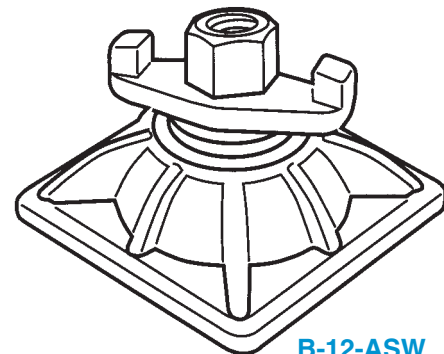
7/8" B-12-AW - 39,200 lbs. Safe Working Load

5/8" B-12-ASW - 21,900 lbs. Safe Working Load

7/8" B-12-ASW - 39,200 lbs. Safe Working Load



**B-12-AW Wing Nut**



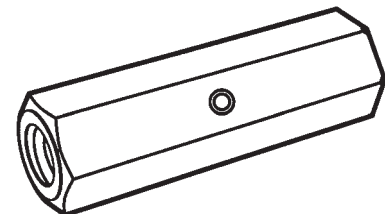
**B-12-ASW  
Swivel Wing Nut**

## B-12-AC D/R Hex Coupler

5/8" and 7/8" Hex Couplers are available to couple two DS Thread Bars. The Hex Coupler is supplied with 2-1/2 threads per inch and a positive stop.

5/8" B-12-AC - 21,900 lbs. Safe Working Load

7/8" B-12-AC - 38,700 lbs. Safe Working Load



**B-12-AC Hex Coupler**

### To Order B-12-A:

Specify: (1) quantity, (2) name, (3) length.

### Example:

500 pcs. B-12-A D/R Thread Bar, 20'-0" long.

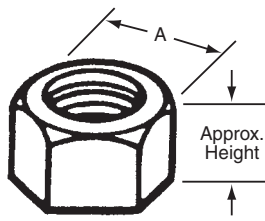
### To Order D/R Thread Bar Working Parts:

Specify: (1) quantity, (2) name.

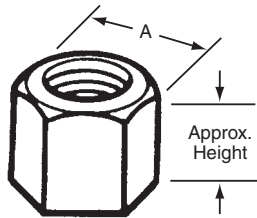
### Example:

200 pcs. B-12-ASW D/R Swivel Wing Nuts.

## B-13 Coil Nut and B-25 Heavy Coil Nut



**B-13 Standard Coil Nut**



**B-25 Heavy Coil Nut**

Dayton Superior B-13 Coil Nuts are available with coil threads in 1/2", 3/4", 1", 1-1/4" and 1-1/2" diameters. Dayton Superior B-25 Heavy Coil Nuts are available with coil threads in 1/2", 3/4", 1", and 1-1/4" diameters.

B-13 Coil Nut and B-25 Heavy Coil Nut Selection Chart					
Coil Nut Type	Dia.	Approx. Height	Width Across Flats A	Safe Working Load Tension (lbs.)	
				Using One B-13 Nut	Using Two B-13 Nuts or One B-25 Heavy Nut
B-13	1/2"	7/16"	7/8"	6,000	9,000
B-25	1/2"	1-3/16"	1-1/8"	–	9,000
B-13	3/4"	5/8"	1-1/8"	9,000	18,000
B-25	3/4"	1-3/16"	1-1/8"	–	18,000
B-13	1"	1"	1-5/8"	18,000	37,500
B-25	1"	2"	1-3/8"	–	37,500
B-13	1-1/4"	1-1/4"	2"	27,000	56,250
B-13	1-1/2"	1-1/2"	2-3/8"	40,500	67,500

SWL provides a factor of safety of approximately 2 to 1.

**To Order:**

Specify: (1) quantity, (2) name, (3) bolt diameter.

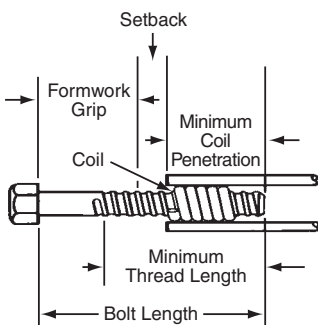
**Example:**

200 pcs. B-13 Coil Nut, 3/4".

## B-14 Coil Bolts

Dayton Superior B-14 Coil Bolts are designed for ease of use and durability. Coil bolts have fast acting, self-cleaning coil threads. B-14 Coil Bolts may be fabricated from ASTM A-307 blanks or from B-12 Coil Rod with welded B-13 Coil Nut heads.

Coil bolts are designed to be reusable, but they do wear and must be continuously inspected and replaced when wear or damage is noted. A waterproof grease should be applied to the portion of bolt that will be embedded in the concrete. This will facilitate bolt removal from the set concrete.



**Minimum Coil Penetration Information**

When determining the minimum required overall length of coil bolts, you must consider the following items:

- Formwork grip (including washer thickness).
- Setback of the form tie or insert.
- Minimum coil penetration (applies to all coil products).



**B-14 Coil Bolt**

**To Order:**

Specify: (1) quantity, (2) name, (3) bolt diameter, (4) length of bolt.

**Example:**

500 pcs. B-14 Coil Bolt, 3/4" diameter, 12" long.

See Chart on Page 63 for bolt selection and minimum bolt penetration.

B-14 Coil Bolt Selection and Minimum Coil Penetration Chart									
1/2" Dia.		3/4" Dia.		1" Dia.		1-1/4" Dia.		1-1/2" Dia	
Forged Hex Head		Forged Hex Head		Forged Hex Head		Forged Hex Head		Forged Hex Head	
Safe Work Load		Safe Work Load		Safe Work Load		Safe Work Load		Safe Work Load	
Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear	Tension	Shear
Under 6" 4,125 lbs	Under 6" 2,750 lbs	9,000 lbs.	6,000 lbs.	18,000 lbs.	12,000 lbs.	27,000 lbs.	18,000 lbs.	41,250 lbs.	27,500 lbs.
6" & Over 6,750 lbs.	6" & Over 4,500 lbs.								
Minimum Coil Penetration 2"		Minimum Coil Penetration 2-1/4"		Minimum Coil Penetration 2-1/2"		Minimum Coil Penetration 2-1/2"		Minimum Coil Penetration 3"	
Minimum Root Area .1385 Sq. In.		Minimum Root Area .3079 Sq. In.		Minimum Root Area .5410 Sq. In.		Minimum Root Area .9161 Sq. In.		Minimum Root Area 1.3890 Sq. In.	
Threads per inch 6		Threads per inch 4-1/2		Threads per inch 3-1/2		Threads per inch 3-1/2		Threads per inch 3-1/2	
Bolt Length	Minimum Thread Length	Bolt Length	Minimum Thread Length	Bolt Length	Minimum Thread Length	Bolt Length	Minimum Thread Length	Bolt Length	Minimum Thread Length
3"	2-1/4"	3"	2-1/4"	3"	2"	3"	2"	—	—
4"	3-1/4"	4"	3-1/4"	4"	3"	4"	3"	4"	3"
5"	4-1/4"	5"	4-1/4"	5"	4"	5"	4"	5"	4"
6"	5"	6"	5"	6"	5"	6"	5"	6"	5"
Over 6"	5"	Over 6"	5"	Over 6"	5"	Over 6"	5"	Over 6"	5"

SWL provides a factor of safety of approximately 2 to 1.

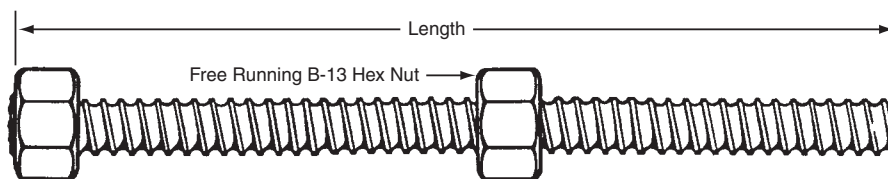
**Warning:** See Page 7 before using B-14 Coil Bolts.

## B-14-A Adjustable Coil Bolt

Dayton Superior B-14-A Adjustable Coil Bolt consists of a length of B-12 Coil Rod with a B-13 Coil Nut welded on one end and a free-running B-13 Coil Nut on the other end. The B-14-A allows formwork adjustments to be made with the free-running nut and can accommodate various form thickness as with one size adjustable bolt. This is especially useful in forming battered walls.

B-14-A Adjustable Coil Bolts are designed to be reusable, but they do wear and must be continuously inspected and replaced when wear or damage is noted. A waterproof grease should be applied to the portion of bolt that will be embedded in the concrete. This will facilitate bolt removal from the set concrete.

The safe working load of the B-14-A bolt is limited by the safe working load of the welded coil nut head.



**B-14-A Adjustable Coil Bolt**

B-14-A Adjustable Coil Bolt Selection Chart				
Diameter	Safe Working Load Tension (lbs.)	Safe Working Load Shear (lbs.)	Minimum Area (sq. in.)	Minimum Coil Penetration
1/2"	6,000	4,500	.1385	2"
3/4"	9,000	6,000	.3079	2-1/4"

SWL provides a factor of safety of approximately 2 to 1.

**Warning:** See Page 7 before using B-14 Coil Bolts.

### To Order:

Specify: (1) quantity, (2) name, (3) diameter, (4) length.

### Example:

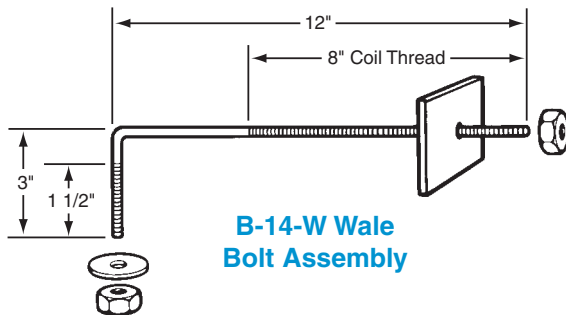
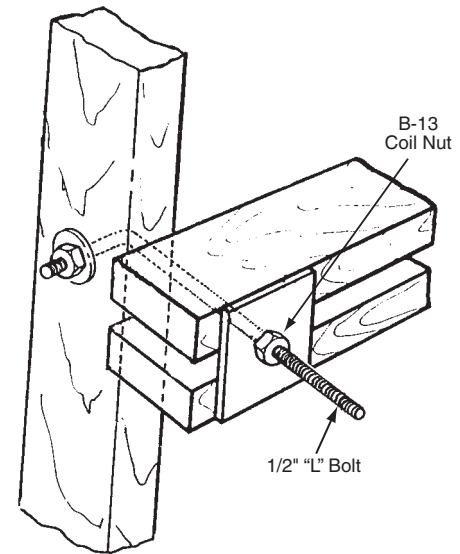
400 pcs. B-14-A Adjustable Coil Bolt, 1/2" diameter, 18" length.

## B-14-W Wale Bolt Assembly

Dayton Superior B-14-W Wale Bolt Assembly consists of a 1/2" "L" bolt, a round cut washer, a B-11 Flat Washer and two 1/2" B-13 Coil Nuts. The B-14-W assembly is used to fasten wales to crane-handled gang forms. One size assembly will secure wales up to 10" thick. The bolt has 8" of coil thread on the long end and 1-1/2" of coil thread on the short end.

The short end of the bolt is inserted through a 9/16" hole drilled through the center of the stud. The cut washer and 1/2" nut fastens the bolt to the stud. The long end of the bolt extends between the wales and allows the wales to be drawn tightly against the stud using a flat washer and the second 1/2" nut.

Wale Bolt Assemblies are normally spaced at four feet intervals along the wales. The safe working load of the assembly is dependent on the wale members being used.



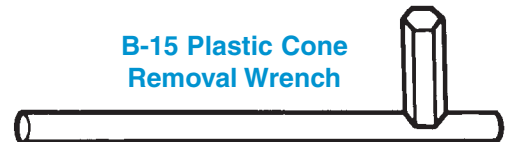
**To Order:**  
Specify: (1) quantity, (2) name.

**Example:**  
300 pcs. B-14-W Wale Bolt Assembly, complete with nuts and washers.

## B-15 Plastic Cone Removal Wrench

Dayton Superior B-15 Plastic Cone Removal Wrench is designed to remove the plastic cones from Screw-On Coil Ties. Available for 1/2", 3/4", 1" and 1-1/4" diameter cones.

**B-15 Plastic Cone Removal Wrench**



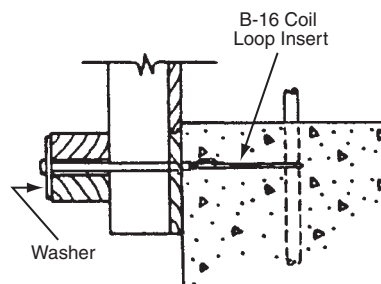
## B-16 Coil Loop Insert Straight

Dayton Superior B-16 Coil Loop Insert Straight is made of a single looped wire strut welded to a helix coil. B-16 inserts are available in 1/2", 3/4" and 1" nominal diameter standard or screw-on coil and in various standard lengths. The B-16 is also available in other than standard lengths and with a nailing washer face on special order.

B-16 Coil Loop Insert, Straight Selection Chart				
Bolt Diameter	Insert Length	Wire Strut Diameter	Safe Working Load Tension (lbs.)	Minimum Concrete Strength (psi)
1/2"	3"	.223	4,500	2,000
1/2"	4"	.223	4,500	2,000
1/2"	6"	.306	7,500	2,000
3/4"	4"	.223	4,500	2,000
3/4"	6"	.306	7,500	2,000
1"	6"	.306	7,500	2,000
1"	8"	.306	7,500	2,000



**B-16 Coil Loop Insert**



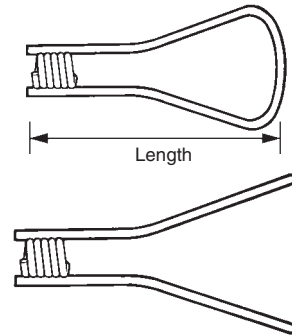
**To Order:**  
Specify:  
(1) quantity,  
(2) name,  
(3) diameter,  
(4) insert length

SWL provides a factor of safety of approximately 2 to 1.  
SWL may vary with concrete weight and strength, as well as with insert setback and edge distance. Contact the Dayton Superior Technical Service Department for variables.

## B-17 Double Flared Coil Loop Insert

Dayton Superior B-17 Double Flared Coil Loop Insert is made with two looped wire struts welded to a helix coil. The B-17 insert is suitable for heavy form anchorage in mass concrete construction. Standard length is 12" for 1", 1-1/4" and 1-1/2" diameter units. Standard 6" nominal flares are supplied unless special size or shaped flares are requested.

B-17 Double Flared Coil Loop Insert Selection Chart					
Bolt Diameter x Insert Length	Flare width	Wire Strut Diameter	Safe Working Load Tension (lbs.)	Minimum Concrete Strength (psi)	Minimum Edge Distance
1" x 12" Std.	5-3/4"	.375"	18,000	2,000	15"
1" x 12" Hvy.	5-3/4"	.442"	27,000	2,000	15"
1-1/4" x 12" Std.	6"	.375"	18,000	2,000	15"
1-1/4" x 12" Hvy.	6"	.442"	27,000	2,000	15"
1-1/2" x 12" Std.	6-1/4"	.375"	18,000	2,000	15"
1-1/2" x 12" Hvy.	6-1/4"	.442"	27,000	2,000	15"



**B-17 Double Flared Coil Loop Insert**

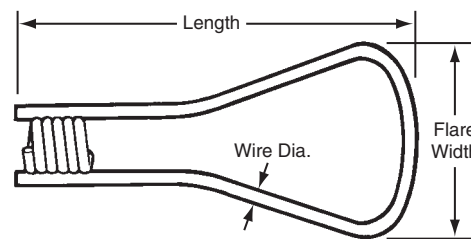
**To Order:**  
Specify: (1) quantity, (2) name, (3) size, (4) SWL.

**Example:**  
500 pcs. B-17 Double Flared Coil Loop Inserts, 1-1/4" diameter, 27,000 lbs. SWL.

SWL provides a factor of safety of approximately 2 to 1. SWL may vary with concrete weight and strength, as well as with insert setback and edge distance. Contact the Dayton Superior Technical Service Department for variables.

## B-18 Single Flared Coil Insert

Dayton Superior B-18 Single Flared Coil Insert is made with the loop end flared for greater anchorage in the concrete. Standard lengths and sizes are shown in the chart. Special lengths and flare shapes can be special ordered.



**B-18 Single Flared Coil Insert**

**To Order:**  
Specify: (1) quantity, (2) bolt diameter, (3) length, (4) SWL.

**Example:**  
500 pcs. B-18 Single Flared Coil Loop Insert, 3/4", 9", 7,500 SWL.

B-18 Single Flared Coil Loop Insert Selection Chart					
Bolt Dia. x Insert Length	Flare width	Wire Strut Diameter	Safe Working Load Tension (lbs.)	Minimum Concrete Strength (psi)	Minimum Edge Distance
1/2" x 4" or 6" or 8"	3"	.223"	4,500	2,000	11"
3/4" x 6" or 9" or 12"	5-1/2"	.306"	7,500	2,000	13"
3/4" x 6" or 9" or 12"	5-1/2"	.375"	9,000	2,000	13"
3/4" x 9" or 12"	5-1/2"	.442"	13,500	2,000	13"
1" x 6" or 9" or 12"	5-1/2"	.375"	9,000	2,000	15"
1" x 9" or 12"	5-1/2"	.442"	15,000	2,000	15"
1-1/4" x 12"	5-1/2"	.375"	9,000	2,000	15"
1-1/4" x 12"	5-1/2"	.442"	15,000	2,000	15"
1-1/4" x 12"	5-1/2"	.442"	15,000	2,000	15"

SWL are based on 1/2" set back from face of concrete.

SWL provides a factor of safety of approximately 2 to 1.

SWL vary with concrete weight and strength as well as insert setback. For use in other than 2,000 psi normal weight concrete, contact our technical service department.