

Product Image



Concrete Rod Hangers

Concrete rod hangers are manufactured for use in concrete slabs, beams, or concrete over metal where threaded rod is intended to be suspended. These carbon steel fasteners are robust screw anchors with threads that cut deep, creating a self-tapping concrete screw that offers low installation torque. Suitable applications for use are electrical conduit and cable-tray applications, pipe hanging, fire protection, and suspension of HVAC equipment.

Features:

- Self-tapping tip
- Single piece construction
- Serrated cutting teeth and threads quickly cut through base material
- Specialized heat treatment process increases tip hardness

Material Specifications

Component	Material
Screw Body	Carbon steel
Coupling/Eyelet	Carbon steel
Zinc Plating	ASTM B633, SC1, Type III (Fe/Zn5)

Suitable Base Materials

- Concrete slabs
- Beams
- Concrete over metal

Product Specifications

Dimension	Anchor Diameter, d		
	1/4"	3/8"	1/2"
ANSI Drill Bit (in.)	1/4"	1/4"	3/8"
Overall Screw Shank Length	1-1/4"	1-1/2"	2-3/4"
Anchor Thread Length (in.)	1-1/8"	1-3/8"	2-1/2"
Root Diameter	15/64"	15/64"	23/64"
Coupler/Washer Height (in.)	27/64"	9/16"	53/65"
Integral Washer O.D. (in.)	31/64"	39/64"	31/32"
Coupling Thread Size (UNC)	1/4"-20	3/8"-16	1/2"-13
Coupling Thread Depth (in.)	3/8"	1/2"	3/4"
Socket Driver Size (in.)	3/8"	1/2"	11/16"

Note: Install with the appropriate sized concrete socket driver.

Installation Instructions



Installation Instructions:

1. Drill a hole to the appropriate embedment depth, adding at least 1/4" to the drilling depth to prevent the tip of the fastener from running into the back of the anchor hole during installation.
2. Remove drilling debris from the holes using compressed air or by hand using a blow out bulb or plastic tubing. A clean hole is necessary to insure proper installation.
3. Select the appropriate socket driver for the anchor size and type to be installed and mount into chuck of installation tool. Insert the rod hanger coupling into the socket driver and install perpendicular to the base material surface. Drive the fastener with a smooth steady motion until the driver and coupling is seated against the surface of the base material.
4. Thread the appropriate diameter steel threaded rod or threaded bolt into the coupling. The threaded rod or bolt should fully engage the thread length of the coupling on a vertical mount fastener. The threaded rod or threaded portion of the bolt can pass through coupling of a side mount fastener.

Installation Tips:

- Concrete thickness must be at least two times anchor hanger size greater than the drilled hole depths.
- Follow all applicable safety requirements.

Concrete Rod Hanger – Ultimate Load Capacities when Installed in Normal-Weight Concrete^{1,2,3}

PN#	Screw Size	Mount Direction	Rod Coupler Size	ANSI Drill Bit Dia. in.	Embed. Depth in.	Average Ultimate Load lbs.			
						2,000 psi		4,000 psi	
						Tension lbs.	Shear lbs.	Tension lbs.	Shear lbs.
SSC14B	1/4" x 1-1/4"	Vertical	1/4"	1/4"	1-1/4"	1,053	1,807	1,798	1,941
SSC38B	1/4" x 1-1/2"	Vertical	3/8"	1/4"	1-1/2"	1,615	3,156	2,983	2,953
SSC12B	3/8" x 2-3/4"	Vertical	1/2"	3/8"	2-3/4"	5,271	6,723	6,888	6,624

1. The values listed above are ultimate load capacities for anchors installed in normal-weight concrete.
2. The values listed above are ultimate load capacities that must be reduced by a minimum safety factor of 4.0 or greater to determine the allowable working load.
3. Strength of threaded rod used with Dottie Rod Hangers must be considered when determining the controlling load capacity of the assembly.

Concrete Rod Hanger – Allowable Tension Capacities when Installed in Normal-Weight Concrete¹

PN#	Screw Size	Mount Direction	Rod Coupler Size	ANSI Drill Bit Dia. in.	Embed. Depth in.	Minimum Concrete Compressive Strength f'_c				
						2,000 psi	2,500 psi	3,000 psi	3,500 psi	4,000 psi
SSC14B	1/4" x 1-1/4"	Vertical	1/4"	1/4"	1-1/4"	265	310	360	405	450
SSC38B	1/4" x 1-1/2"	Vertical	3/8"	1/4"	1-1/2"	405	490	575	660	745
SSC12B	3/8" x 2-3/4"	Vertical	1/2"	3/8"	2-3/4"	1,320	1,420	1,520	1,620	1,720

1. Strength of threaded rod used with Dottie Rod Hangers must be considered when determining the controlling load capacity of the assembly.

Concrete Rod Hanger – Allowable Shear Capacities when Installed in Normal-Weight Concrete¹

PN#	Screw Size	Mount Direction	Rod Coupler Size	ANSI Drill Bit Dia. in.	Embed. Depth in.	Minimum Concrete Compressive Strength f'_c
						2,000 psi
SSC14B	1/4" x 1-1/4"	Vertical	1/4"	1/4"	1-1/4"	450
SSC38B	1/4" x 1-1/2"	Vertical	3/8"	1/4"	1-1/2"	740
SSC12B	3/8" x 2-3/4"	Vertical	1/2"	3/8"	2-3/4"	1,650

1. Strength of threaded rod used with Dottie Rod Hangers must be considered when determining the controlling load capacity of the assembly.

Concrete Rod Hanger – Load Adjustment Factors for Spacing and Edge Distances , Tension & Shear ¹

Spacing and/or Edge Distances, in.	Hanger Size, in.		
	1/4"	3/8"	1/2"
2"	0.05"	-	-
2-1/4"	0.56"	0.50"	-
2-1/2"	0.63"	0.56"	-
2-3/4"	0.69"	0.61"	-
3"	0.75"	0.67"	-
3-1/4"	0.81"	0.72"	-
3-1/2"	0.88"	0.78"	-
3-3/4"	0.94"	0.83"	-
4"	1.00"	0.89"	0.50"
4-1/4"	1.00"	0.94"	0.53"
4-1/2"	1.00"	1.00"	0.56"
4-3/4"	1.00"	1.00"	0.59"
5"	1.00"	1.00"	0.63"
5-1/4"	1.00"	1.00"	0.66"
5-1/2"	1.00"	1.00"	0.69"
5-3/4"	1.00"	1.00"	0.72"
6"	1.00"	1.00"	0.75"
6-1/4"	1.00"	1.00"	0.78"
6-1/2"	1.00"	1.00"	0.81"
6-3/4"	1.00"	1.00"	0.84"
7"	1.00"	1.00"	0.88"
7-1/4"	1.00"	1.00"	0.91"
7-1/2"	1.00"	1.00"	0.94"
7-3/4"	1.00"	1.00"	0.97"
8"	1.00"	1.00"	1.00"

1. Multiply factor(s) times the applicable allowable tension or shear load value from the tables for desired edge distance or spacing. Where both edge and spacing distances have factors less than 1.00, multiply both factors together and multiply the resulting factor times the applicable allowable load from Table 2 or Table 3.