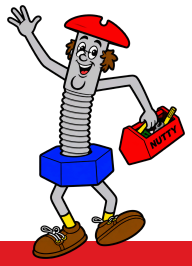
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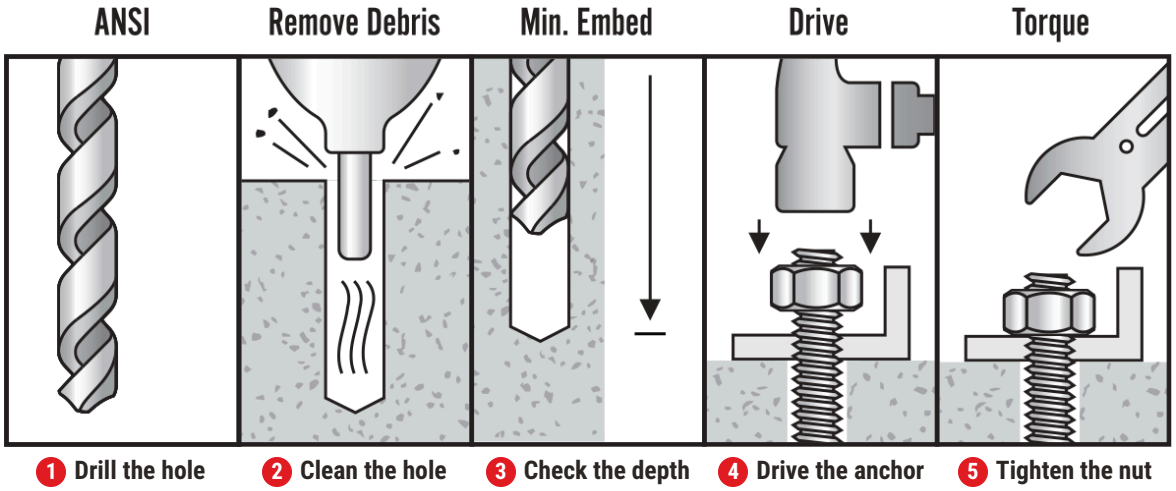
INSTALLATION INSTRUCTIONS

Zinc Plated Stud (Wedge) Anchors



- **Supplied with nut and washer**: ready to install.
- **Hole size = anchor size**: drill straight through the fixture.
- For **solid concrete**, grout-filled block and hard stone. Not for hollow block or brick.
- **Zinc plated carbon steel** for dry, indoor locations.

1.0 Installation Read all steps before you start



1. **Drill the hole.** Use a carbide-tipped masonry bit meeting **ANSI B212.15**, the **same diameter as the anchor** (a 1/2" anchor takes a 1/2" bit). Drill perpendicular to the surface. You can drill through the fixture. Do not ream the hole or let the drill wobble.
2. **Clean the hole.** Blow out the dust with compressed air, brush with a nylon brush, then blow out again. Dust left in the hole lowers the holding power.
3. **Check the depth.** Drill the hole **at least 1/2" deeper than the embedment** so the anchor can go in fully, but no closer than two anchor diameters to the bottom surface of the concrete. Minimum embedment for each size is on page 2.
4. **Drive the anchor.** Thread the nut on flush with the end of the anchor, with the washer under it, to protect the threads. Put the anchor through the fixture and hammer it in until the washer is **tight against the fixture** and the anchor reaches at least the minimum embedment.
5. **Tighten the nut.** Tighten the nut **3 to 5 turns past hand-tight**, or to the setting torque below with a torque wrench. This pulls the cone up into the clip and wedges it against the hole. Do not over-tighten.

Choosing the Anchor Length

Anchor length = Min. embedment + Fixture thickness + Nut & washer thickness

The nut and washer take up about one anchor diameter. **Example:** 1/2" anchor through a 1/2" steel plate: 2-1/8" + 1/2" + about 9/16" = 3-3/16" → choose the next longer stock length, **3-3/4"** (WEJ12334). A longer anchor gives deeper embedment and more holding power. The letter stamped on the end of each anchor shows its length (codes on page 2).

Setting Torque (normal-weight concrete)

Anchor Dia.	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1-1/4"
Torque (ft-lbs)	6–8	20–25	50–55	90–95	165–175	240–250	290–300	400–410

Safety: Always wear safety glasses. Follow the drill manufacturer's instructions. Do not install in concrete that has not fully cured.

2.0 Stock Numbers & Sizes

Zinc Plated Carbon Steel • drill size = anchor diameter

Stock #	Size (Dia. x Length)	Drill Size	Min. Embedment
WEJ14134	1/4" x 1-3/4"	1/4"	1-1/4"
WEJ14214	1/4" x 2-1/4"	1/4"	1-1/4"
WEJ14314	1/4" x 3-1/4"	1/4"	1-1/4"
WEJ38214	3/8" x 2-1/4"	3/8"	1-3/4"
WEJ38234	3/8" x 2-3/4"	3/8"	1-3/4"
WEJ383	3/8" x 3"	3/8"	1-3/4"
WEJ38334	3/8" x 3-3/4"	3/8"	1-3/4"
WEJ385	3/8" x 5"	3/8"	1-3/4"
WEJ387	3/8" x 7"	3/8"	1-3/4"
WEJ12234	1/2" x 2-3/4"	1/2"	2-1/8"
WEJ12334	1/2" x 3-3/4"	1/2"	2-1/8"
WEJ12414	1/2" x 4-1/4"	1/2"	2-1/8"
WEJ12412	1/2" x 4-1/2"	1/2"	2-1/8"
WEJ12512	1/2" x 5-1/2"	1/2"	2-1/8"
WEJ127	1/2" x 7"	1/2"	2-1/8"
WEJ12812	1/2" x 8-1/2"	1/2"	2-1/8"
WEJ1210	1/2" x 10"	1/2"	2-1/8"
WEJ58312	5/8" x 3-1/2"	5/8"	2-5/8"
WEJ58414	5/8" x 4-1/4"	5/8"	2-5/8"
WEJ585	5/8" x 5"	5/8"	2-5/8"
WEJ586	5/8" x 6"	5/8"	2-5/8"

Stock #	Size (Dia. x Length)	Drill Size	Min. Embedment
WEJ587	5/8" x 7"	5/8"	2-5/8"
WEJ58812	5/8" x 8-1/2"	5/8"	2-5/8"
WEJ5810	5/8" x 10"	5/8"	2-5/8"
WEJ5812	5/8" x 12"	5/8"	2-5/8"
WEJ34414	3/4" x 4-1/4"	3/4"	3-1/4"
WEJ34434	3/4" x 4-3/4"	3/4"	3-1/4"
WEJ34512	3/4" x 5-1/2"	3/4"	3-1/4"
WEJ34614	3/4" x 6-1/4"	3/4"	3-1/4"
WEJ347	3/4" x 7"	3/4"	3-1/4"
WEJ34812	3/4" x 8-1/2"	3/4"	3-1/4"
WEJ3410	3/4" x 10"	3/4"	3-1/4"
WEJ3412	3/4" x 12"	3/4"	3-1/4"
WEJ786	7/8" x 6"	7/8"	3-7/8"
WEJ788	7/8" x 8"	7/8"	3-7/8"
WEJ7810	7/8" x 10"	7/8"	3-7/8"
WEJ16	1" x 6"	1"	4"
WEJ19	1" x 9"	1"	4"
WEJ112	1" x 12"	1"	4"
WEJ1149	1-1/4" x 9"	1-1/4"	5-5/8"
WEJ11412	1-1/4" x 12"	1-1/4"	5-5/8"

3.0 Installation Data by Diameter

Anchor Dia.	Drill Size	Thread (UNC)	Wrench Size	Min. Embedment	Setting Torque (ft-lbs)	Min. Edge Distance	Critical Edge Distance
1/4"	1/4"	1/4-20	7/16"	1-1/4"	6–8	1-1/4"	3"
3/8"	3/8"	3/8-16	9/16"	1-3/4"	20–25	1-7/8"	4-1/2"
1/2"	1/2"	1/2-13	3/4"	2-1/8"	50–55	2-1/2"	6"
5/8"	5/8"	5/8-11	15/16"	2-5/8"	90–95	3-1/8"	7-1/2"
3/4"	3/4"	3/4-10	1-1/8"	3-1/4"	165–175	3-3/8"	9"
7/8"	7/8"	7/8-9	1-5/16"	3-7/8"	240–250	4-3/8"	10-1/2"
1"	1"	1-8	1-1/2"	4"	290–300	5"	12"
1-1/4"	1-1/4"	1-1/4-7	1-7/8"	5-5/8"	400–410	6-1/4"	15"

4.0 Length Identification Codes

Stamped on the end of each anchor

Code	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
From	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	4-1/2"	5"	5-1/2"	6"	6-1/2"	7"	7-1/2"	8"	8-1/2"	9"	9-1/2"	10"	11"	12"
Up to (not incl.)	2"	2-1/2"	3"	3-1/2"	4"	4-1/2"	5"	5-1/2"	6"	6-1/2"	7"	7-1/2"	8"	8-1/2"	9"	9-1/2"	10"	11"	12"	13"

Minimum embedment is the least depth the anchor must be set into the concrete; drill the hole at least 1/2" deeper. Setting torque is for normal-weight concrete. Minimum spacing between anchors equals the embedment depth; space anchors 2 embedment depths apart, and use the critical edge distance, for full load. Design loads must be calculated by a qualified engineer.

Disclaimer: The above is a compilation of data from various industry standards. The Nutty Company, Inc. has made every effort to present the data accurately. However, The Nutty Company, Inc. cannot be held liable for any claim traceable to any errors, typographical or otherwise, contained herein.



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5.0 Material & Specifications

Property	Specification
Anchor Body	Carbon steel, AISI 1035 (UNS G10350)
Expansion Clip	Carbon steel, ASTM A108 Grade 1018
Nut	Carbon steel hex nut, ASME B18.2.2
Washer	Carbon steel flat washer, ASME B18.22.1
Finish	Zinc plated, ASTM B633 Type III
Base Material	Normal-weight concrete, lightweight concrete and grouted concrete masonry
Applications	Railings, base plates, shelving & racking, machinery, sill plates & ledgers, lighting standards, structural connections

6.0 Ultimate Load Capacities Normal-weight concrete

Anchor Dia.	Min. Embed. Depth	f'c = 4,000 psi Concrete		f'c = 6,000 psi Concrete	
		Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)
1/4"	1-1/8"	1,368	1,377	1,950	1,377
	1-3/4"	1,565	1,704	1,949	1,704
3/8"	1-5/8"	2,744	3,644	4,529	3,644
	2-3/8"	3,703	3,664	5,577	3,664
1/2"	2-1/4"	4,413	6,456	7,735	6,456
	3-3/4"	6,788	6,276	9,565	6,276
5/8"	2-3/4"	7,938	11,043	9,108	11,043
	4-5/8"	10,094	9,909	11,982	9,909
3/4"	3-3/8"	10,283	14,863	11,661	14,863
	5-5/8"	10,668	14,596	12,350	14,596
1"	4-1/2"	16,612	28,429	22,902	28,429
	8"	22,457	29,099	25,538	29,099

7.0 Allowable Load Capacities Normal-weight concrete • factor of safety 4.0

Anchor Dia.	Min. Embed. Depth	f'c = 4,000 psi Concrete		f'c = 6,000 psi Concrete	
		Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)
1/4"	1-1/8"	342	344	488	344
	1-3/4"	392	426	487	426
3/8"	1-5/8"	686	911	1,132	911
	2-3/8"	926	916	1,394	916
1/2"	2-1/4"	1,103	1,614	1,934	1,614
	3-3/4"	1,697	1,569	2,391	1,569
5/8"	2-3/4"	1,985	2,761	2,277	2,761
	4-5/8"	2,524	2,477	2,996	2,477
3/4"	3-3/8"	2,571	3,716	2,915	3,716
	5-5/8"	2,667	3,649	3,088	3,649
1"	4-1/2"	4,153	7,107	5,726	7,107
	8"	5,619	7,275	6,385	7,275

- Ultimate load capacities must be reduced by a minimum factor of safety of 4.0 to determine allowable loads.
- Safety factors of 10 or higher may be necessary depending on the application, such as life safety or overhead.
- Tabulated load values are for anchors installed in uncracked concrete.
- Concrete must reach the specified strength before installation. Design loads must be calculated by a qualified engineer.