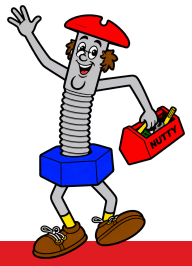
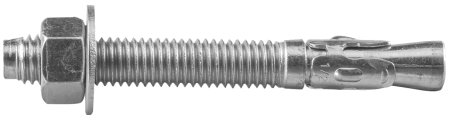
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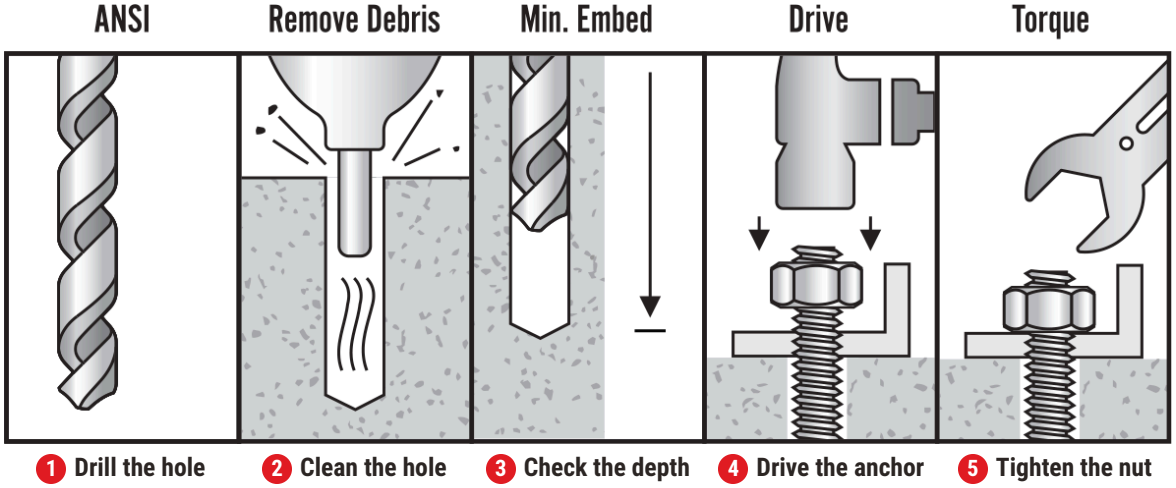
INSTALLATION INSTRUCTIONS

Hot-Dip Galvanized 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.
- **Hot-dip galvanized** (ASTM A153) with a Type 304 stainless clip, for outdoor and damp 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"** (GWEJ12334). 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)	4–8	20–25	40–50	80–90	145–155	220–230	255–280	390–400

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

Hot-Dip Galvanized Steel • drill size = anchor diameter

Stock #	Size (Dia. x Length)	Drill Size	Min. Embedment
GWEJ14134	1/4" x 1-3/4"	1/4"	1-1/4"
GWEJ14214	1/4" x 2-1/4"	1/4"	1-1/4"
GWEJ14314	1/4" x 3-1/4"	1/4"	1-1/4"
GWEJ38214	3/8" x 2-1/4"	3/8"	1-3/4"
GWEJ38234	3/8" x 2-3/4"	3/8"	1-3/4"
GWEJ383	3/8" x 3"	3/8"	1-3/4"
GWEJ38334	3/8" x 3-3/4"	3/8"	1-3/4"
GWEJ385	3/8" x 5"	3/8"	1-3/4"
GWEJ387	3/8" x 7"	3/8"	1-3/4"
GWEJ12234	1/2" x 2-3/4"	1/2"	2-1/8"
GWEJ12334	1/2" x 3-3/4"	1/2"	2-1/8"
GWEJ12414	1/2" x 4-1/4"	1/2"	2-1/8"
GWEJ12512	1/2" x 5-1/2"	1/2"	2-1/8"
GWEJ127	1/2" x 7"	1/2"	2-1/8"
GWEJ12812	1/2" x 8-1/2"	1/2"	2-1/8"
GWEJ1210	1/2" x 10"	1/2"	2-1/8"
GWEJ58312	5/8" x 3-1/2"	5/8"	2-5/8"
GWEJ58414	5/8" x 4-1/4"	5/8"	2-5/8"
GWEJ58412	5/8" x 4-1/2"	5/8"	2-5/8"
GWEJ585	5/8" x 5"	5/8"	2-5/8"
GWEJ586	5/8" x 6"	5/8"	2-5/8"

Stock #	Size (Dia. x Length)	Drill Size	Min. Embedment
GWEJ587	5/8" x 7"	5/8"	2-5/8"
GWEJ58812	5/8" x 8-1/2"	5/8"	2-5/8"
GWEJ5810	5/8" x 10"	5/8"	2-5/8"
GWEJ5812	5/8" x 12"	5/8"	2-5/8"
GWEJ34414	3/4" x 4-1/4"	3/4"	3-1/4"
GWEJ34434	3/4" x 4-3/4"	3/4"	3-1/4"
GWEJ34512	3/4" x 5-1/2"	3/4"	3-1/4"
GWEJ34614	3/4" x 6-1/4"	3/4"	3-1/4"
GWEJ347	3/4" x 7"	3/4"	3-1/4"
GWEJ34812	3/4" x 8-1/2"	3/4"	3-1/4"
GWEJ3410	3/4" x 10"	3/4"	3-1/4"
GWEJ3412	3/4" x 12"	3/4"	3-1/4"
GWEJ786	7/8" x 6"	7/8"	3-7/8"
GWEJ788	7/8" x 8"	7/8"	3-7/8"
GWEJ7810	7/8" x 10"	7/8"	3-7/8"
GWEJ16	1" x 6"	1"	4"
GWEJ19	1" x 9"	1"	4"
GWEJ112	1" x 12"	1"	4"
GWEJ1149	1-1/4" x 9"	1-1/4"	5-5/8"
GWEJ11412	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"	4–8	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"	40–50	2-1/2"	6"
5/8"	5/8"	5/8-11	15/16"	2-5/8"	80–90	3-1/8"	7-1/2"
3/4"	3/4"	3/4-10	1-1/8"	3-1/4"	145–155	3-3/8"	9"
7/8"	7/8"	7/8-9	1-5/16"	3-7/8"	220–230	4-3/8"	10-1/2"
1"	1"	1-8	1-1/2"	4"	255–280	5"	12"
1-1/4"	1-1/4"	1-1/4-7	1-7/8"	5-5/8"	390–400	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	Type 304 stainless steel
Nut	Carbon steel hex nut, ASME B18.2.2, hot-dip galvanized
Washer	Carbon steel flat washer, ASME B18.22.1, hot-dip galvanized
Finish	Hot-dip galvanized, ASTM A153
Base Material	Normal-weight concrete, lightweight concrete and grouted concrete masonry
Applications	Outdoor & damp locations: railings, docks, fences, base plates, sill plates & ledgers, lighting standards, structural connections

6.0 Ultimate Load Capacities Normal-weight concrete

Anchor Dia.	Embed. Depth	f'c = 2,000 psi		f'c = 4,000 psi		f'c = 6,000 psi	
		Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)
1/4"	1-1/4"	1,430	2,370	1,650	2,510	1,860	2,510
	2-3/4"	2,470	2,370	2,590	2,510	2,750	2,510
3/8"	1-3/4"	2,120	3,610	3,850	3,920	4,790	3,920
	4-5/8"	5,040	3,880	6,020	5,190	6,640	5,190
1/2"	2-1/8"	3,860	6,580	6,320	6,920	7,540	6,920
	6-1/4"	6,420	7,170	8,250	7,510	10,710	7,510
5/8"	2-5/8"	6,410	9,390	9,530	11,950	10,600	11,950
	7"	12,820	9,860	16,580	12,310	17,420	12,310
3/4"	3-3/4"	8,390	12,440	13,130	15,860	18,980	15,860
	7-7/8"	14,160	13,700	19,800	23,810	24,150	23,810
7/8"	4"	8,520	19,180	16,590	24,220	19,950	24,220
	8"	15,740	20,260	27,480	25,740	33,110	25,740
1"	5"	11,220	27,690	26,680	32,490	30,680	32,490
	9"	27,160	28,390	36,170	36,900	40,510	36,900
1-1/4"	5-5/8"	17,210	46,970	28,730	46,970	37,040	46,970
	10"	29,040	46,970	50,390	46,970	58,990	46,970

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

Anchor Dia.	Embed. Depth	f'c = 2,000 psi		f'c = 4,000 psi		f'c = 6,000 psi	
		Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)
1/4"	1-1/4"	360	600	420	630	470	630
	2-3/4"	620	600	650	630	690	630
3/8"	1-3/4"	530	910	970	980	1,200	980
	4-5/8"	1,260	970	1,510	1,300	1,660	1,300
1/2"	2-1/8"	970	1,650	1,580	1,730	1,890	1,730
	6-1/4"	1,610	1,800	2,070	1,880	2,680	1,880
5/8"	2-5/8"	1,610	2,350	2,390	2,990	2,650	2,990
	7"	3,210	2,470	4,150	3,080	4,360	3,080
3/4"	3-3/4"	2,100	3,110	3,290	3,970	4,750	3,970
	7-7/8"	3,540	3,430	4,950	5,960	6,040	5,960
7/8"	4"	2,130	4,795	4,150	6,055	4,990	6,055
	8"	3,940	5,065	6,870	6,435	8,280	6,435
1"	5"	2,810	6,923	6,670	8,123	7,670	8,123
	9"	6,790	7,098	9,050	9,225	10,130	9,225
1-1/4"	5-5/8"	4,310	11,750	7,190	11,750	9,260	11,750
	10"	7,260	11,750	12,600	11,750	14,750	11,750

- 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.
- Loads shown at the minimum and deepest tested embedment, in uncracked concrete.
- Concrete must reach the specified strength before installation. Design loads must be calculated by a qualified engineer.