



Copper Clad Steel Ground Rods

Part No.	Size	Approx. Each Wt. (lbs)	Standard Bundle	Approx. Wt. lbs/Bundle	UL Mark	With UPC Label
1208UPC	1/2" x 8'	6	5	30	Yes	Yes
1210	1/2" x 10'	7	5	35	Yes	No
588	5/8" x 8'	7	5	35	Yes	No
588RUS	5/8" x 8'	7	5	35	Yes	No
588UPC	5/8" x 8'	7	5	35	Yes	Yes
5810	5/8" x 10'	9	5	45	Yes	No
5810PC	5/8" x 10'	9	5	45	Yes	Yes
348	3/4" x 8'	11	5	55	Yes	No
3410	3/4" x 10'	13	5	65	Yes	No
3412	3/4" x 12'	15	5	75	Yes	No
110	1" x 10'	23	3	69	Yes	No



Solid and Tinned Copper Conductors

Solid Single Soft-Drawn Bare Copper

Part No.	Electro Tin Plated	Size (AWG)	Diameter	CM Area	Approx. Wt. lbs/M ft.
10	No	10	.101	10,380	31-1/2
10T	Yes	10	.101	10,380	31-1/2
8	No	8	.128	16,510	50
8T	Yes	8	.128	16,510	50
6	No	6	.162	26,240	80
6T	Yes	6	.162	26,240	80
4	No	4	.204	41,470	126
4T	Yes	4	.204	41,470	126
2	No	2	.257	66,360	201
2T	Yes	2	.257	66,360	201



Stranded Copper Conductors

Concentric Lay Soft-Drawn Bare Copper

Bare Part #	Electro Tin Plated Part#	Size (AWG)	No. of Strands	CM Area	Approx. Wt. lbs/M ft.
8-7	87T	8	7	16,510	51
6-7	67T	6	7	26,240	81
4-7	47T	4	7	41,470	127
3-7	37T	3	7	52,630	163
2-7	27T	2	7	66,360	204
2-19	219T	2	19	66,360	250
1-7	17T	1	7	83,690	258
1-19	119T	1	19	83,690	258
1/0-19	1/019T	1/0	19	105,600	325
2/0-7	2/07T	2/0	7	133,100	410
2/0-19	2/0-19T	2/0	19	133,100	410
3/0-7	3/0-7T	3/0	7	167,800	518
3/0-19	3/0-19T	3/0	19	167,800	518
4/0-7	4/0-7T	4/0	7	211,600	653
4/0-19	4/0-19T	4/0	19	211,600	653
250MCM-19	250MCMT	250	19	250,000	772



7 Strand Concentric



19 Strand Concentric

Technical Notes

- **NEC 2017 Article 250.53(G) (Summarized)** The electrode shall be installed so that 8' of length is in contact with the soil. It shall be driven to a depth of not less than 8' except where rock bottom is encountered. In the case of bedrock, the electrode shall be driven at an angle not to exceed 45 degrees from the vertical or shall be buried in a trench that is at least 2-1/2' deep.
- **UL 467 6.9.2.3 (Summarized)** A solid rod electrode of copper or other suitable non-ferrous metal, or a solid rod electrode of iron or steel with a copper or other suitable non-ferrous metal or stainless steel jacket, shall have a diameter not less than 1/2" thick.
- **UL 467 6.9.2.6 (Summarized)** The copper jacket shall not be less than .010" thick at any point.
- **RUS (Rural Utilities Service)** ground rods typically have a 13 mil copper plating thickness

Notes

- Sizes up to 1000 MCM are available. Please contact the facility for special requests.
- Harger offers standard reel sizes, however we will cut to specified lengths. Contact factory for reel sizes/put ups.
- 7 strand Bare conductor shall meet the requirements of ASTM B-3 & ASTM B-8.
- 19 strand Bare conductor shall meet the requirements of ASTM B-3 & ASTM B-787.
- 7 strand Tinned Copper conductors shall meet the requirements of ASTM B-3, ASTM B-8, & ASTM B-33.
- 19 strand Tinned Copper shall meet the requirements of ASTM B-3, ASTM B-33, & ASTM B-787.

Ground Access Wells

PVC Well with Cover				
Part No.	Diameter	Length	Cover Type	Approx. Each Wt. (lbs)
358PP	8"	24"	Plastic	12
358PS	8"	24"	Flat Steel	14
360PP	10"	24"	Plastic	15
360PS	10"	24"	Flat Steel	19
362PS	12"	24"	Flat Steel	22

- For use in non-vehicular traffic areas.
- Schedule 40 PVC well.
- Steel covers are 3/16" thick commercial grade steel with a zinc/ultraseal coating.
- Plastic covers are manufactured from High Density Polyethylene.



HDPE Well with Cover				
Part No.	Diameter	Length	Cover Type	Approx. Each Wt. (lbs)
GAW910	9"	10-1/4"	HDPE	4-1/2

- For use in non-vehicular traffic areas.
- Molded High Density Polyethylene well features a 9" diameter "twist lock" cover with locking bolt.
- Static vertical load rating = 350 PSF.
- 2 knock outs (mouse holes) allow for routing conductor to the inside.



PVC Slotted Well with Cover				
Part No.	Diameter	Length	Cover Type	Approx. Each Wt. (lbs)
358P42	8"	42"	Flat Steel	19
358PP42	8"	42"	Plastic	17
360P42	10"	42"	Flat Steel	30
360PP42	10"	42"	Plastic	26

- For use in non-vehicular traffic areas.
- Schedule 40 PVC well.
- Steel covers are 3/16" thick commercial grade steel with a zinc/ultraseal coating.
- Plastic covers are manufactured from High Density Polyethylene.
- Four 27" slots allow for ground electrode connections to be made before installation of test well.



Application Notes

- Provides ready access to ground electrode for testing and inspection purposes.
- To prevent displacement by frost, the access well must be longer than the frost line is deep.