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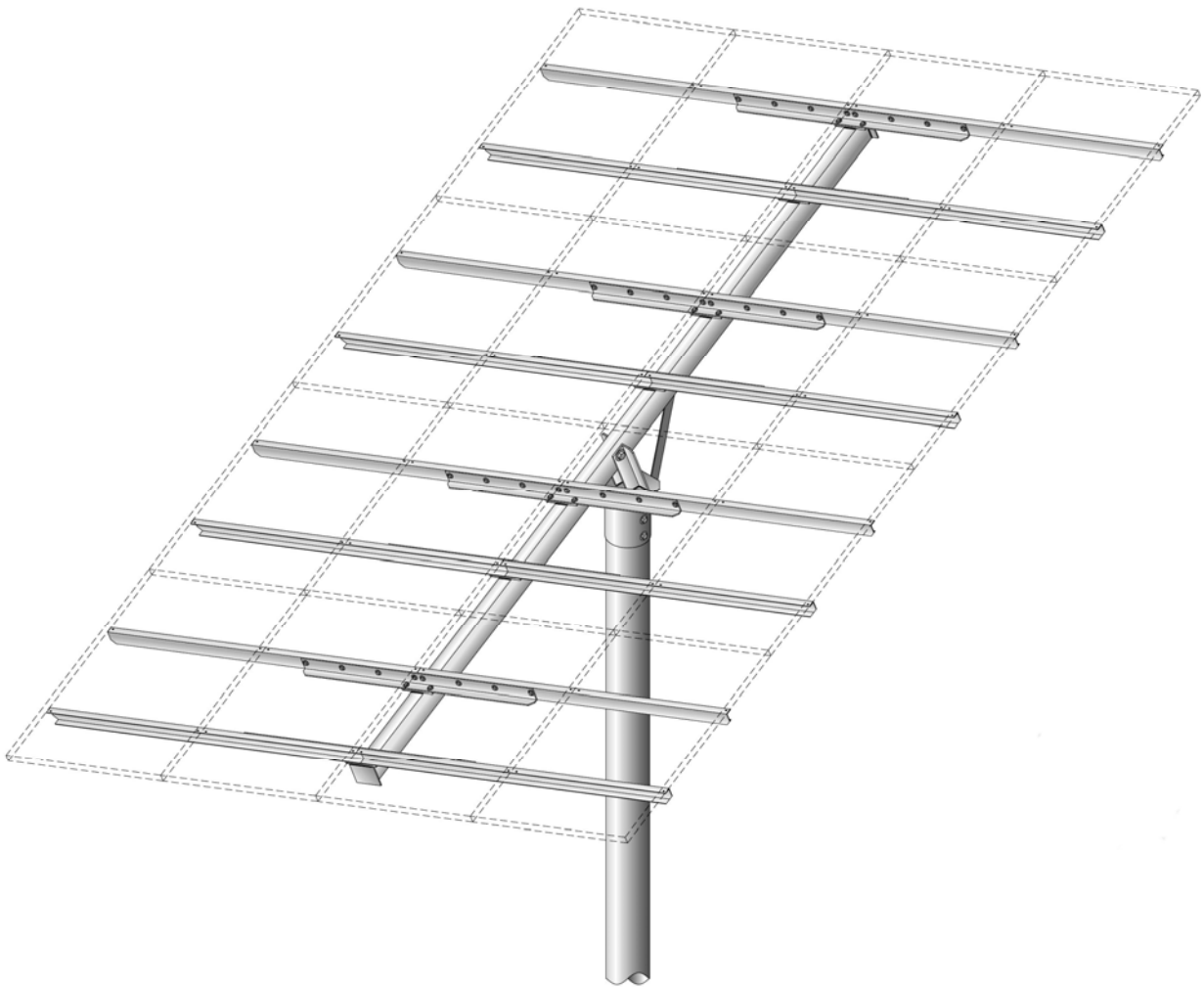
POWER-FAB

QUALITY HARDWARE FOR THE PV INDUSTRY

**INSTALLATION
INSTRUCTIONS
SERIES 225-8/80**

**SERIES 225-8/80 TOP-OF-POLE MOUNT
INSTALLATION INSTRUCTIONS**

Designed to hold approximately 225 Sq. Ft. of solar modules
and to mount on an 8" SCH 80 Pole



SERIES 225-8/80 Rack

INSTALLATION INSTRUCTIONS FOR **SERIES 225-8/80 TOP-OF-POLE MOUNTS** **(4X4 MODULE ARRANGEMENT)**

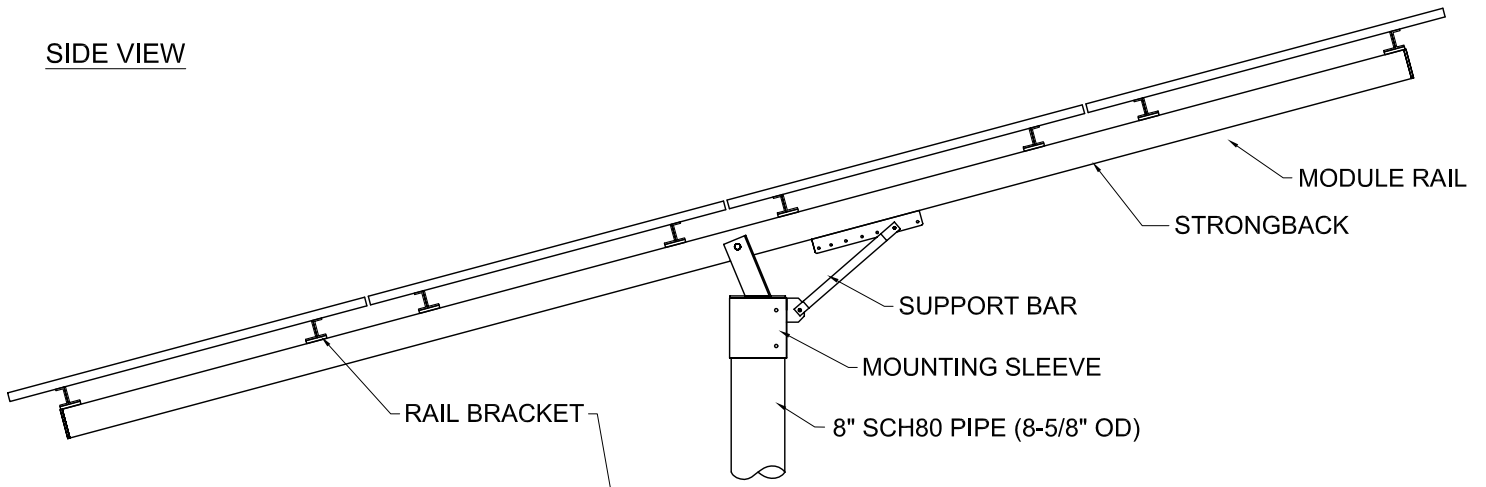
Components:

- 1ea. Strongback with Support Bar
- 8 ea. Rail Brackets, 3"x2" angle 34.5" long
- 1ea. Mounting Sleeve with Pivot Bolt
- 8 ea. Module Rails – 3"x1.5" aluminum channel
- 1 lot rack assembly hardware
- 1 lot module mounting hardware
- 1 Support Bar

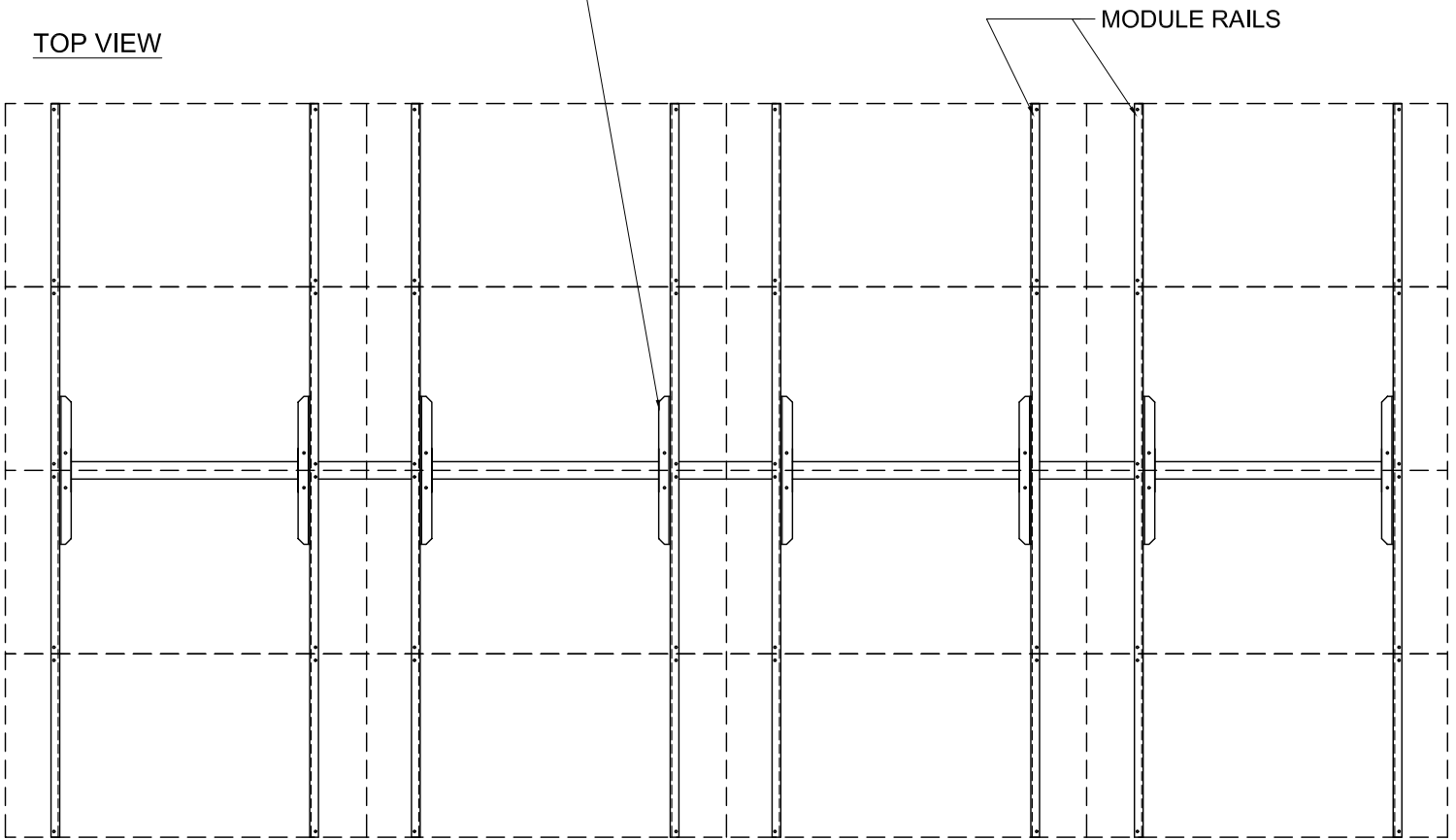
1. You will need a piece of 8" SCH80 steel pipe (8-5/8" OD) for a mounting pole. This piece of pipe should be 15-17 feet long. Dig a hole about 36" in diameter and 72"-84" deep. Put the pole into the hole and pour concrete around it, filling the hole to the top. Brace the pole so that it is straight and let the concrete harden. If you live in an area with deep snow build-up you may want a taller pole. For every extra foot above ground you need to have about 8" more in the ground in concrete. [These are just guidelines. The actual depth and diameter of the hole and the amount of concrete used is very dependent on soil type and local wind conditions. Installations in loose, sandy soil will require a larger, deeper hole with more concrete than in hard, rocky soil. If in doubt, we recommend that you consult a civil engineer in your area that is familiar with local soil conditions.] If you live in an area that can get winds in the 80mph-90mph range and your site is flat, open ground with no trees, buildings, etc to break up the wind you may need to go up to an 8" SCH80 pipe for your mounting pole. Please consult the factory if in doubt.
2. Bolt the Mounting Sleeve to the Strongback and attach the free end of the Support Bar to the Angle Adjustment Plate on the Strongback. Bolt it to the hole farthest away from the pivot bolt in the Strongback.
3. Place the Strongback/Mounting Sleeve Assembly on the mounting pole, aim it south and lock it in place by tightening the set bolts on the sleeve.
4. This rack has seven elevation angle set points. They are: 0, 15, 25, 35, 45, 55 and 65 degrees. For assembly and module mounting it is probably easiest to lock the rack in the flattest (0-degree) position.
5. Bolt the Rail Brackets to the 1/2" thick plates that are welded on top of the Strongback using the 1/2"x1-3/4" bolts and hardware and positioned as shown in the drawings (you must install the Rail Brackets as shown in the drawings or the rails will not be positioned properly).
6. Bolt the Module Rails to the Rail Brackets using the 3/8" x 1-1/4" bolts and hardware. The Module Rails must be positioned as shown in the drawings.
7. Attach your photovoltaic modules to the module rails as shown in the drawings using the 1/4" or 5/16" stainless steel hardware provided.
8. Be sure all rack and module bolts are tight.
9. When changing the elevation setting, loosen the pivot bolt before adjusting the rack. After changing the position of the Support Arm and tightening the two 1/2" bolts be sure to tighten the pivot bolt.

SERIES 225-8/80 4x4 ARRAY

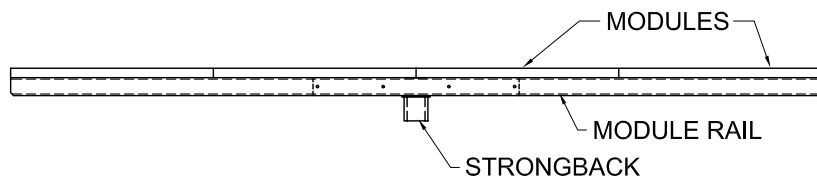
SIDE VIEW



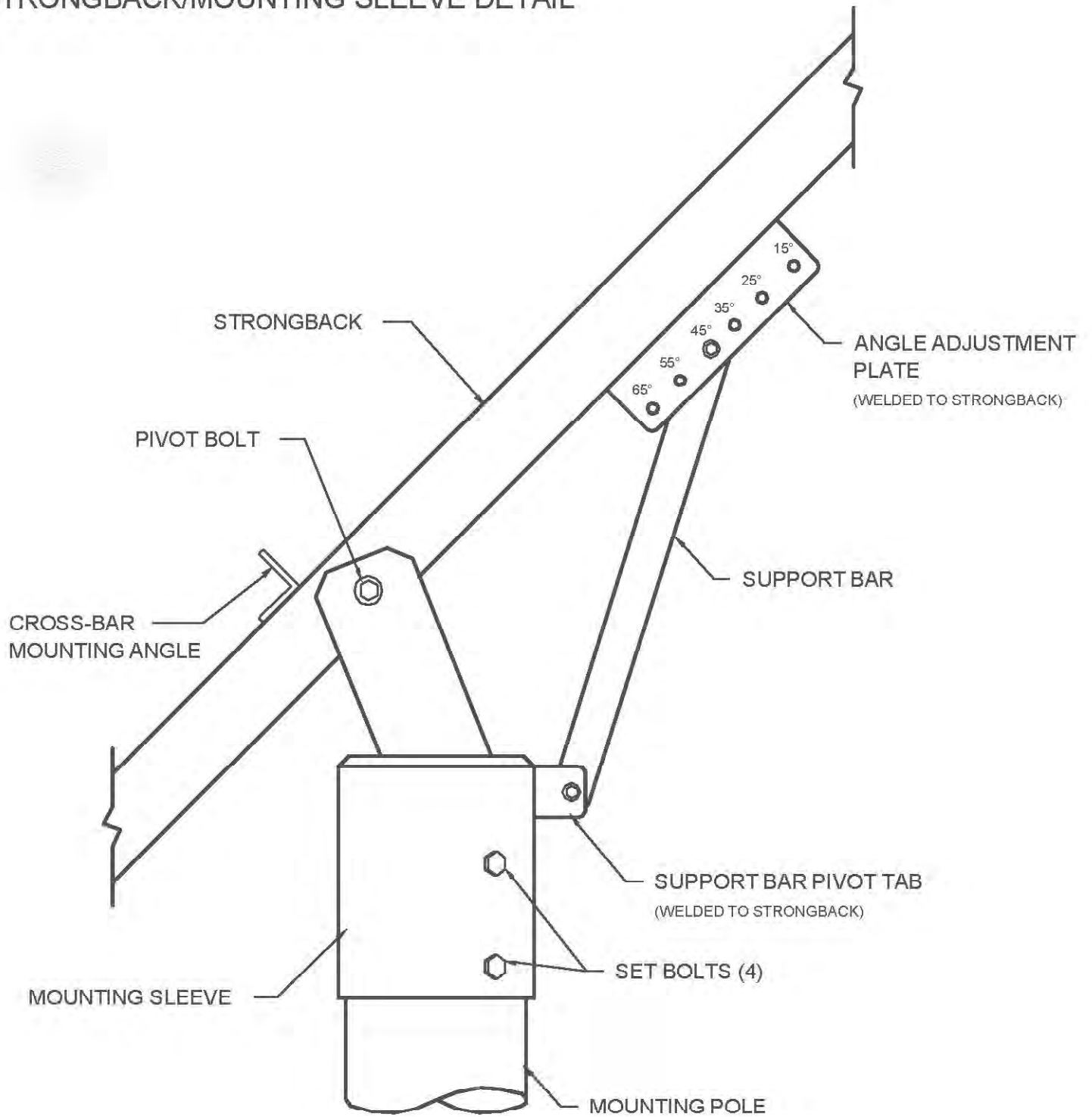
TOP VIEW



END VIEW



STRONGBACK/MOUNTING SLEEVE DETAIL



The following table provides “rule-of-thumb” guidelines for an average installation. Soil type varies widely from one region to another. The actual depth and diameter of the hole and the amount of concrete used is very dependent on soil type. Installations in loose, sandy soil will require a larger, deeper hole with more concrete than an installation in hard, rocky soil. The amount of pole sticking out of the ground and the wind speeds in your area also play an important role in determining the depth and diameter of the hole. If in doubt, we recommend that you consult a civil engineer in your area that is familiar with local soil conditions.

MODULE AREA	POLE SIZE (STEEL PIPE)	LENGTH IN GROUND	HEIGHT * ABOVE GROUND	HOLE DIAMETER
15 SQ. FT.	2" SCH40 (2-3/8" OD)	30"-36"	48"-72"	8"-12"
20 SQ. FT.	2.5" SCH40 (2-7/8" OD)	34"-40"	48"-72"	10"-14"
28 SQ. FT.	3" SCH40 (3-1/2" OD)	36"-42"	48"-72"	12"-16"
35 SQ. FT.	3" SCH40 (3-1/2" OD)	38"-44"	60"-72"	12"-16"
60 SQ. FT.	4" SCH40 (4-1/2" OD)	42"-48"	60"-72"	16"-24"
90 SQ. FT.	6" SCH40 (6-5/8" OD)	48"-60"	60"-84"	24"-30"
120 SQ. FT.	6" SCH40 (6-5/8" OD)	48"-72"	72"-84"	24"-30"
160 SQ. FT.	8" SCH40 (8-5/8" OD)	60"-78"	84"-102"	30"-36"
180 SQ. FT.	8" SCH40 (8-5/8" OD)	60"-78"	84"-102"	30"-36"
225 SQ. FT.	8" SCH80 (8-5/8" OD)	72"-84"	96"-120"	36"
260 SQ. FT.	8" SCH40 (8-5/8" OD)	72"-84"	96"-120"	36"

* If you need a taller pole for snow clearance or to clear nearby obstructions you will need to have more pole in the ground. For each extra foot that you add above ground you will need approximately 6" in the ground in concrete.

If you have to go more than 2ft-3ft higher than what is shown in the table you may need a larger diameter pole. Please consult the factory.

General Procedure: When your hole is ready place the piece of pipe in it so that it is resting on the bottom of the hole - it is a good idea to fill the bottom 2"-4" of the hole with rocks. Brace the pole plumb and pour concrete around it. Fill the hole to ground level, add a little extra concrete and use a trowel to form a mound around the pole so that the concrete slopes down away from the pole. Allow the concrete to set up for at least 24 hours before installing your rack.

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POWER-FAB PV HARDWARE
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At its option, DP&WC will repair or replace at no charge any DP&WC product that proves to be defective within such warranty period. This warranty shall not apply if the DP&WC product has been damaged by unreasonable use, accident, negligence, service or modification by anyone other than Direct Power & Water Corporation, or by any other causes unrelated to materials and workmanship.

The original consumer purchaser must retain original purchase receipt for proof of purchase as a condition precedent to warranty coverage. To receive in-warranty service, the defective product must be received no later than one (1) week after the end of the warranty period. The product must be accompanied by proof of purchase and Return Authorization (RA) number issued by DP&WC. For an RA number contact Direct Power & Water Corporation, 4000-B Vassar Dr NE, Albuquerque, New Mexico 87107 (505) 889-3585. Purchasers must prepay all delivery costs or shipping charges to return any defective DP&WC product under this warranty policy.

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