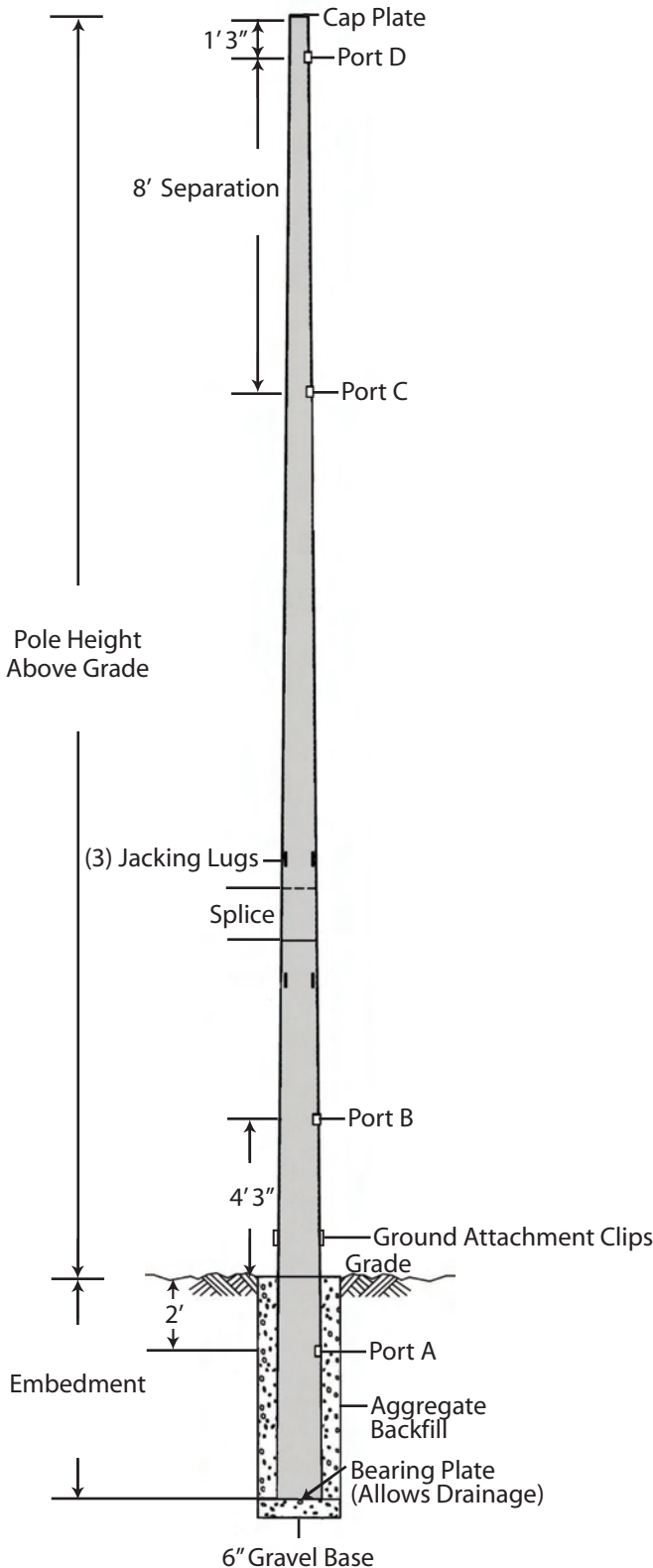


POLES



DIRECT EMBED POLE
STANDARD DESIGNS

DIRECT EMBED POLES

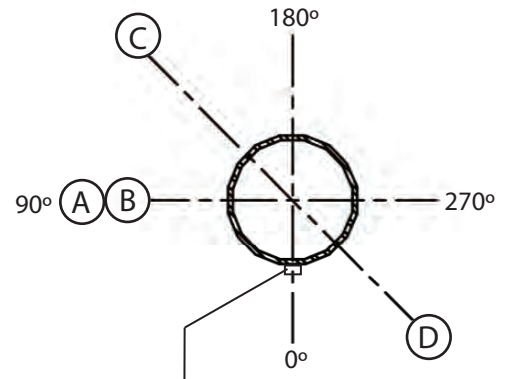


GENERAL USE

ROHN Direct Embed Poles minimize site requirements, lowering lease rates and acquisition costs. They are designed for rapid installation, meeting the demands of today's dynamic communication environments. Whether you are supporting broadband, PCS, security or other lightweight systems, ROHN Tapered Steel Poles offer extremely efficient designs.

FEATURES

- Completely hot-dip galvanized after fabrication
- Fast, easy installation
- Designed for applications with stringent deflection requirements
- Internal routing of transmission lines
- Each pole ships with the following:
 - Assembly Drawings and Standard Foundation Details
 - (4) 5" x 7" Ports with (2) port covers
 - (3) Jacking Lugs on each side of splices
 - (3) Ground attachment clips
 - (1) Vented cap plate
 - (1) Bearing plate welded to bottom
 - Safety Climb Support Brackets
 - (1) Safety warning sign
 - (1) Pole ID tag
 - Attachment clips for optional step bolts
- Optional items are available and may be ordered separately. Please see accessories on page 225.
- Custom designs available for any height or application.



Safety Climb Support Bracket
(Safety Cable System Ordered Separately)

PORT ORIENTATIONS

Per Rev G requirements, any structure greater than 10' requires a climber safety device. Please see page 225 for ordering information.



BUYERS GUIDE

The pole loading charts included in this section were created to help you identify the standard pole that most closely meets your needs. The charts include the design wind speed, sway, total EPA that the pole can support and pole embedment requirements. Once the correct structure is identified, use the part number at the top of each section to order your pole.

Part Number for ordering direct embed poles

Sway at TIA operational wind speed

30'
Height Above Grade

WIND SPEED (MPH)		LIGHT			MEDIUM			HEAVY		
		DEP30LA			DEP30MA			DEP30HA		
FASTEST MILE	3-SECOND GUST	SWAY LIMIT			SWAY LIMIT			SWAY LIMIT		
		4°	3°	2°	4°	3°	2°	4°	3°	2°
		EPA (FT ²)			EPA (FT ²)			EPA (FT ²)		
70	85	69	49	29	110	108	68	170	170	143
80	100	52	49	29	80	80	68	126	126	126
90	110	38	38	29	59	59	59	95	95	95
100	120	27	27	27	44	44	44	74	74	74
110	130	19	19	19	32	32	32	57	57	57
120	140	13	13	13	24	24	24	45	45	45
EMBEDMENT		DEPTH 10'	DIA. 2.5'		DEPTH 11'	DIA. 2.5'		DEPTH 13'	DIA. 3.0'	

Total effective projected area of antennas, mounts and lighting allowed on pole (see pg. 226)

Depth and diameter of embedment for gravel backfill. Installation adds 6" to the depth for gravel base

LOADING CHARTS

40'

WIND SPEED (MPH)		LIGHT			MEDIUM			HEAVY		
		DEP40LA			DEP40MA			DEP40HA		
FASTEST MILE	3-SECOND GUST	SWAY LIMIT			SWAY LIMIT			SWAY LIMIT		
		4°	3°	2°	4°	3°	2°	4°	3°	2°
		EPA (FT ²)			EPA (FT ²)			EPA (FT ²)		
70	85	69	49	29	110	108	68	170	170	143
80	100	52	49	29	80	80	68	126	126	126
90	110	38	38	29	59	59	59	95	95	95
100	120	27	27	27	44	44	44	74	74	74
110	130	19	19	19	32	32	32	57	57	57
120	140	13	13	13	24	24	24	45	45	45
EMBEDMENT		DEPTH 12'	DIA. 2.5'		DEPTH 13'	DIA. 2.5'		DEPTH 15'	DIA. 3.0'	

50'

WIND SPEED (MPH)		LIGHT			MEDIUM			HEAVY		
		DEP50LA			DEP50MA			DEP50HA		
FASTEST MILE	3-SECOND GUST	SWAY LIMIT			SWAY LIMIT			SWAY LIMIT		
		4°	3°	2°	4°	3°	2°	4°	3°	2°
		EPA (FT ²)			EPA (FT ²)			EPA (FT ²)		
70	85	69	49	29	110	108	68	170	170	143
80	100	52	49	29	80	80	68	126	126	126
90	110	38	38	29	59	59	59	95	95	95
100	120	27	27	27	44	44	44	74	74	74
110	130	19	19	19	32	32	32	57	57	57
120	140	13	13	13	24	24	24	45	45	45
EMBEDMENT		DEPTH 15'	DIA. 2.5'		DEPTH 16'	DIA. 2.5'		DEPTH 17'	DIA. 3.0'	



LOADING CHARTS

60'

WIND SPEED (MPH)		LIGHT			MEDIUM			HEAVY					
		DEP60LA			DEP60MA			DEP60HA					
		SWAY LIMIT			SWAY LIMIT			SWAY LIMIT					
FASTEST MILE	3-SECOND GUST	4°	3°	2°	4°	3°	2°	4°	3°	2°			
		EPA (FT ²)			EPA (FT ²)			EPA (FT ²)					
70	85	52	35	19	99	80	48	150	150	104			
80	100	46	35	19	71	71	48	109	109	104			
90	110	32	32	19	50	50	48	81	81	81			
100	120	21	21	19	36	36	36	61	61	61			
110	130	14	14	14	25	25	25	46	46	46			
120	140	8	8	8	17	17	17	35	35	35			
EMBEDMENT		DEPTH	15'	DIA.	2.5'	DEPTH	17'	DIA.	3.0'	DEPTH	19'	DIA.	3.0'

70'

WIND SPEED (MPH)		LIGHT			MEDIUM			HEAVY					
		DEP70LA			DEP70MA			DEP70HA					
		SWAY LIMIT			SWAY LIMIT			SWAY LIMIT					
FASTEST MILE	3-SECOND GUST	4°	3°	2°	4°	3°	2°	4°	3°	2°			
		EPA (FT ²)			EPA (FT ²)			EPA (FT ²)					
70	85	42	28	13	89	63	36	137	129	81			
80	100	42	28	13	63	63	36	98	98	81			
90	110	28	28	13	43	43	36	72	73	73			
100	120	17	17	13	29	29	29	53	53	53			
110	130	9	9	9	19	19	19	39	39	39			
120	140	3	3	3	10	10	10	28	28	28			
EMBEDMENT		DEPTH	16'	DIA.	3.0'	DEPTH	18'	DIA.	3.0'	DEPTH	20'	DIA.	3.5'

80'

WIND SPEED (MPH)		LIGHT			MEDIUM			HEAVY					
		DEP80LA			DEP80MA			DEP80HA					
		SWAY LIMIT			SWAY LIMIT			SWAY LIMIT					
FASTEST MILE	3-SECOND GUST	4°	3°	2°	4°	3°	2°	4°	3°	2°			
		EPA (FT ²)			EPA (FT ²)			EPA (FT ²)					
70	85	28	17	6	65	44	23	117	93	56			
80	100	28	17	6	50	44	23	82	82	56			
90	110	19	17	6	32	32	23	58	58	56			
100	120	9	9	6	19	19	19	41	41	41			
110	130	2	2	2	9	9	9	28	28	28			
120	140	-	-	-	2	2	2	18	18	18			
EMBEDMENT		DEPTH	16'	DIA.	3.0'	DEPTH	18'	DIA.	3.0'	DEPTH	20'	DIA.	3.5'

90'

WIND SPEED (MPH)		LIGHT			MEDIUM			HEAVY					
		DEP90LA			DEP90MA			DEP90HA					
		SWAY LIMIT			SWAY LIMIT			SWAY LIMIT					
FASTEST MILE	3-SECOND GUST	4°	3°	2°	4°	3°	2°	4°	3°	2°			
		EPA (FT ²)			EPA (FT ²)			EPA (FT ²)					
70	85	21	11	2	51	33	16	106	77	44			
80	100	21	11	2	43	33	16	73	73	44			
90	110	14	11	2	25	25	16	50	50	44			
100	120	4	4	2	12	12	12	33	33	33			
110	130	-	-	2	3	3	3	21	21	21			
120	140	-	-	-	-	-	-	13	13	13			
EMBEDMENT		DEPTH	18'	DIA.	3.0'	DEPTH	20'	DIA.	3.0'	DEPTH	22'	DIA.	3.5'

(-) Indicates that pole is not recommended for the tabulated wind speed



LOADING CHARTS

100'

WIND SPEED (MPH)		LIGHT			MEDIUM			HEAVY		
		DEP100LA			DEP100MA			DEP100HA		
		SWAY LIMIT			SWAY LIMIT			SWAY LIMIT		
FASTEST MILE	3-SECOND GUST	4°	3°	2°	4°	3°	2°	4°	3°	2°
		EPA (FT ²)			EPA (FT ²)			EPA (FT ²)		
70	85	16	7	-	42	26	11	91	63	36
80	100	16	7	-	36	26	11	65	63	36
90	110	9	7	-	18	18	11	43	43	36
100	120	-	-	-	6	6	6	26	26	26
110	130	-	-	-	-	-	-	14	14	14
120	140	-	-	-	-	-	-	7	7	7
EMBEDMENT		DEPTH 18'	DIA. 3.0'		DEPTH 20'	DIA. 3.5'		DEPTH 22'	DIA. 3.5'	

110'

WIND SPEED (MPH)		LIGHT			MEDIUM			HEAVY		
		DEP110LA			DEP110MA			DEP110HA		
		SWAY LIMIT			SWAY LIMIT			SWAY LIMIT		
FASTEST MILE	3-SECOND GUST	4°	3°	2°	4°	3°	2°	4°	3°	2°
		EPA (FT ²)			EPA (FT ²)			EPA (FT ²)		
70	85	23	13	-	51	32	14	103	70	41
80	100	23	13	-	47	32	14	77	70	41
90	110	13	13	-	25	25	14	50	50	41
100	120	-	-	-	9	9	9	31	31	31
110	130	-	-	-	-	-	-	17	17	17
120	140	-	-	-	-	-	-	8	8	8
EMBEDMENT		DEPTH 19'	DIA. 3.5'		DEPTH 21'	DIA. 4.0'		DEPTH 22'	DIA. 4.0'	

120'

WIND SPEED (MPH)		LIGHT			MEDIUM			HEAVY		
		DEP120LA			DEP120MA			DEP120HA		
		SWAY LIMIT			SWAY LIMIT			SWAY LIMIT		
FASTEST MILE	3-SECOND GUST	4°	3°	2°	4°	3°	2°	4°	3°	2°
		EPA (FT ²)			EPA (FT ²)			EPA (FT ²)		
70	85	18	10	-	39	24	6	90	62	35
80	100	18	10	-	36	24	6	80	62	35
90	110	5	5	-	15	15	6	55	55	35
100	120	-	-	-	-	-	-	36	36	35
110	130	-	-	-	-	-	-	23	23	23
120	140	-	-	-	-	-	-	14	14	14
EMBEDMENT		DEPTH 19'	DIA. 3.5'		DEPTH 22'	DIA. 4.0'		DEPTH 23'	DIA. 4.0'	

130'

WIND SPEED (MPH)		LIGHT			MEDIUM			HEAVY		
		DEP130LA			DEP130MA			DEP130HA		
		SWAY LIMIT			SWAY LIMIT			SWAY LIMIT		
FASTEST MILE	3-SECOND GUST	4°	3°	2°	4°	3°	2°	4°	3°	2°
		EPA (FT ²)			EPA (FT ²)			EPA (FT ²)		
70	85	19	8	-	39	24	6	83	57	30
80	100	19	8	-	39	24	6	76	57	30
90	110	14	8	-	24	24	6	51	51	30
100	120	2	2	-	11	11	6	32	32	30
110	130	-	-	-	-	-	-	21	21	21
120	140	-	-	-	-	-	-	10	10	10
EMBEDMENT		DEPTH 22'	DIA. 4.0'		DEPTH 23'	DIA. 4.0'		DEPTH 24'	DIA. 4.5'	

(-) Indicates that pole is not recommended for the tabulated wind speed



LOADING CHARTS

140'

WIND SPEED (MPH)		LIGHT			MEDIUM			HEAVY		
		DEP140LA			DEP140MA			DEP140HA		
		SWAY LIMIT			SWAY LIMIT			SWAY LIMIT		
FASTEST MILE	3-SECOND GUST	4°	3°	2°	4°	3°	2°	4°	3°	2°
		EPA (FT ²)			EPA (FT ²)			EPA (FT ²)		
70	85	16	5	-	42	26	6	86	62	31
80	100	16	5	-	42	26	6	86	62	31
90	110	8	5	-	36	26	6	66	62	31
100	120	-	-	-	16	16	6	45	45	31
110	130	-	-	-	-	-	-	28	28	28
120	140	-	-	-	-	-	-	13	13	13
EMBEDMENT		DEPTH 24'	DIA. 4.0'		DEPTH 25'	DIA. 4.5'		DEPTH 26'	DIA. 4.5'	

150'

WIND SPEED (MPH)		LIGHT			MEDIUM			HEAVY		
		DEP150LA			DEP150MA			DEP150HA		
		SWAY LIMIT			SWAY LIMIT			SWAY LIMIT		
FASTEST MILE	3-SECOND GUST	4°	3°	2°	4°	3°	2°	4°	3°	2°
		EPA (FT ²)			EPA (FT ²)			EPA (FT ²)		
70	85	17	5	-	47	26	6	89	63	31
80	100	17	5	-	47	26	6	89	63	31
90	110	17	5	-	30	26	6	65	63	31
100	120	-	-	-	10	10	6	39	39	31
110	130	-	-	-	-	-	-	22	22	22
120	140	-	-	-	-	-	-	6	6	6
EMBEDMENT		DEPTH 24'	DIA. 4.0'		DEPTH 26'	DIA. 4.5'		DEPTH 27'	DIA. 5.0'	

(-) Indicates that pole is not recommended for the tabulated wind speed

1. Pole designs conform to ANSI/TIA/EIA-222-F with 1/2" radial ice and to ANSI/TIA-222-G (Class I, Exposure B, Topographic Category I). Design criteria must be verified prior to installation based on site-specific requirements.
2. Embedment depths are based on "Normal" soil (TIA Rev. F) and clay "Presumptive" soil (TIA Rev. G) with aggregate backfill. Actual site soil design parameters must be verified prior to installation.
3. For corrosive groundwater and/or soil conditions, ROHN recommends additional corrosion control protection such as concrete backfill, additional protective coating over galvanizing or the installation of sacrificial anodes.
4. Embedment depths may require adjustment based on local soil conditions.

PARTS & ACCESSORIES

<p>STEP BOLTS</p> <p>STEP BOLTS START AT 20' ABOVE GRADE (NOMINAL). WHEN ORDERING STEP BOLTS, PLEASE SPECIFY POLE HEIGHT.</p> <p>EX. SBDEP120 for a 120' POLE</p>	<p>JOURNEYMAN CLIMBING HARNESS TTFBH-4D</p> <p>PROFESSIONAL CLIMBING HARNESS TTFBH-C/P</p>	<p>SAFETY CABLE SLIDER WITH CARABINEER TT-WG-500-W/SMC</p>	<p>SAFETY CABLE SYSTEM</p> <table border="1"> <thead> <tr> <th>Pole Height</th> <th>Part Number</th> </tr> </thead> <tbody> <tr> <td>30' - 50'</td> <td>TT050TSP</td> </tr> <tr> <td>60' - 100'</td> <td>TT100TSP</td> </tr> <tr> <td>110' - 150'</td> <td>TT150TSP</td> </tr> </tbody> </table>	Pole Height	Part Number	30' - 50'	TT050TSP	60' - 100'	TT100TSP	110' - 150'	TT150TSP
Pole Height	Part Number										
30' - 50'	TT050TSP										
60' - 100'	TT100TSP										
110' - 150'	TT150TSP										

LIGHTNING ROD
LRCL

5' COPPER CLAD BOLTS TO CAP PLATE, PROVIDED WITH POLE.

GROUNDING KIT
BGK5GGX

KIT INCLUDES (1) GROUND LEAD, GROUND ROD AND CONNECTIONS. ORDER (3) KITS FOR REV G GROUNDING.

PORT DIMENSIONS

A through D PORTS

Larger ports are available, upon request.



ANTENNA INDEX

DISH ANTENNA			
DIAMETER	EPA - FT ²		SWAY LIMIT
	W/ RADOME	W/O RADOME	
(1) 2 FT.	3	6	4°
(1) 3 FT.	7	13	3°
(1) 4 FT.	11	22	2°
(2) 2 FT. B-TO-B	5	8	4°
(2) 3 FT. B-TO-B	11	18	3°
(2) 4 FT. B-TO-B	19	34	2°

FLAT PANEL ANTENNA		
DIMENSION	EPA - FT ²	SWAY LIMIT
1 FT. SQUARE W/ MOUNT	2	4°
2 FT. SQUARE W/ MOUNT	5	2°
3 FT. SQUARE W/ MOUNT	11	2°

1. The above antenna data is intended to assist in the selection of the appropriate ROHN pole. Once the total EPA and sway limit is determined for the antennas, the standard ROHN pole can be selected from the tabulated values. (See example below)
2. Tabulated pole EPA capacities represent the maximum EPA capacity of a pole. The capacity is based on the assumption that 80% of the total EPA is located at the top of the pole and the remaining 20% is located 20 ft. below the top. When all loading is located at the top of the pole, the tabulated EPA capacity must be reduced by 20%.
3. Sway limits are determined under a 50 MPH fastest-mile (Rev. F) or 60 MPH 3-second gust (Rev. G) wind speed.
4. The antenna effective projected areas (EPA) and sway limits provided in the antenna index are guidelines for typical antenna systems. Other values may apply for specific antenna models or for site-specific systems.

Determine EPA & Sway Limit for Dishes or Flat Panel Antennas

1. Using the antenna index, determine the types of antennas to be installed on the pole.
2. Add together the EPA value of all the antennas to be supported.
3. Determine the most restrictive sway limit considering all the antennas to be supported. For example, for one 3' dish with a 3° sway limit and one 1' flat panel with a 4° sway limit, the sway limit for the pole would be 3° and the required pole EPA capacity would be 13+2=15 ft².
4. If all antennas are to be supported at the top of the pole, only 80% of the tabulated EPA capacity shown may be considered when selecting a pole. Alternately, the antenna EPA to be supported may be increased by 25%. For example, the required pole capacity would be 15x1.25=19 ft².
5. Using the pole sway limit and the required EPA capacities, the appropriate pole may be determined from the tabulated values. For example, for a 120 ft. pole and a 100 mph 3-sec gust wind speed, a medium pole [P/N: DEP120MA] would be required for an EPA capacity greater than 19 ft² for a 3° sway limit.