

Applications

The Penetrator™ is a unique and patented omni antenna design that delivers high gain and significant null fill for exceptional close-in (near field) as well as far-out (far field) coverage.

The Penetrator™ is available for 700-960 MHz applications, in a variety of gains and horizontal radiation pattern configurations.

Gain options range from 6-12 dBd, with bandwidths of 32 MHz, electrical downtilt, and null fill. The Penetrator™ can be configured as a directional antenna with a front-to-back ratio of 15 dB.

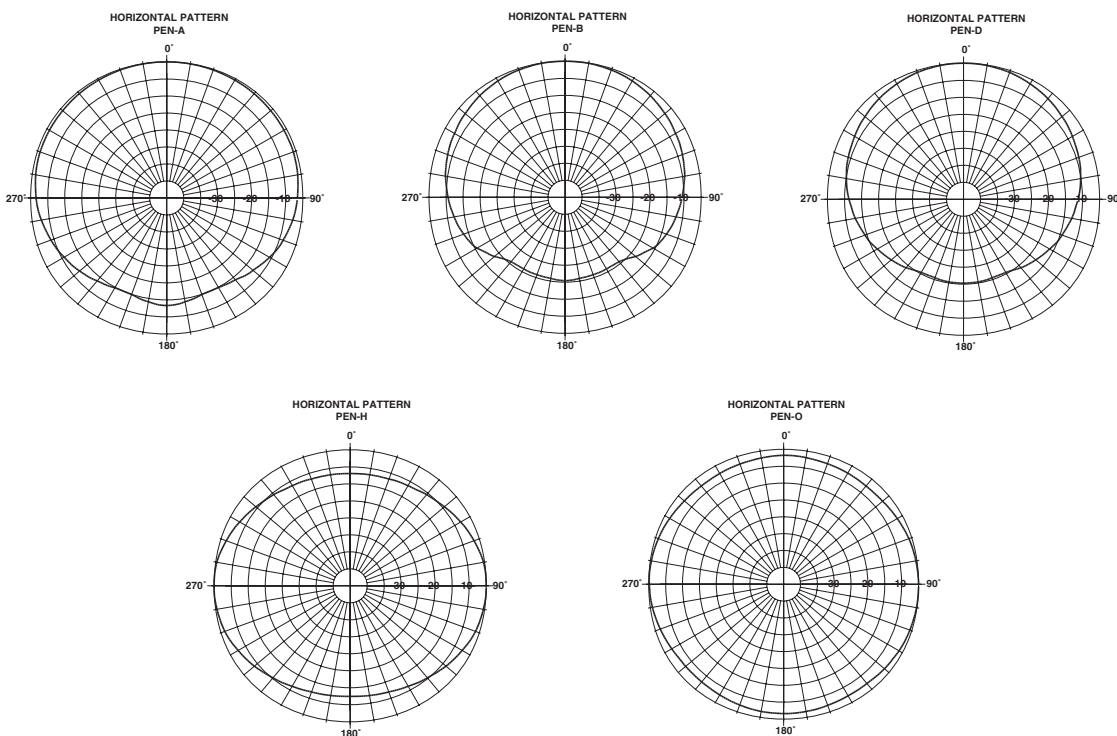
Features & Benefits

- High gain maximizes ERP
- Heavy null fill enhances close-in coverage
- Customized beamtilt minimizes interference to and from adjacent systems
- Various radiation patterns are available to efficiently cover the target area



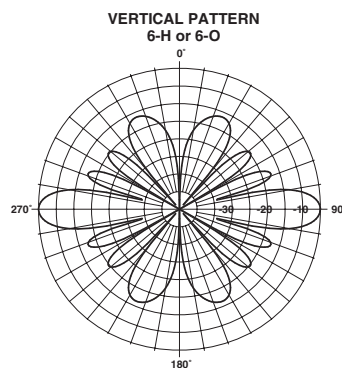
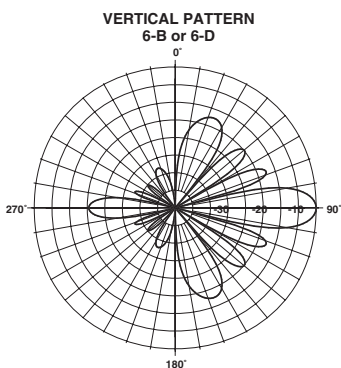
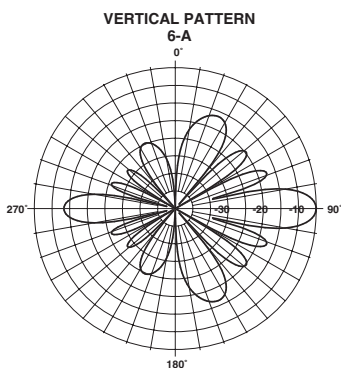
BCR* Series

Typical Horizontal Patterns

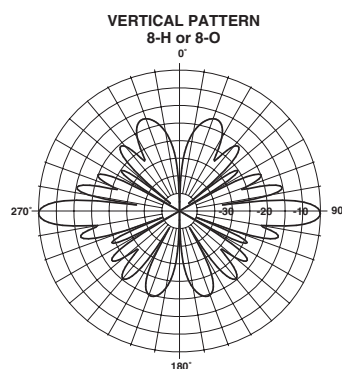
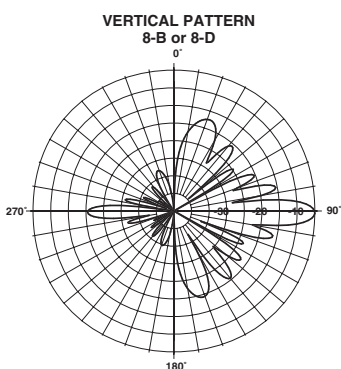
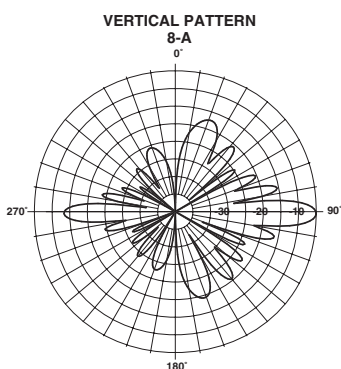


Vertical Patterns

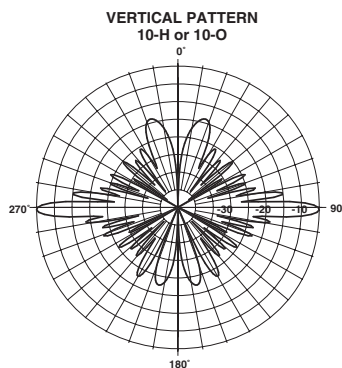
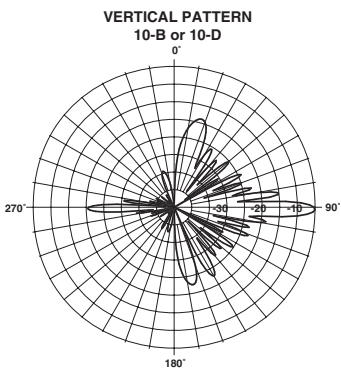
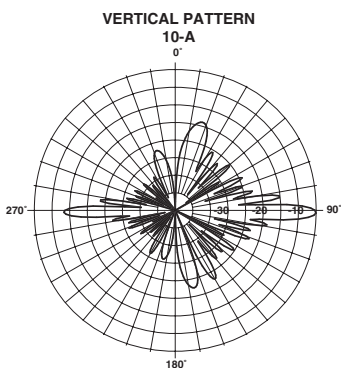
6 dBd



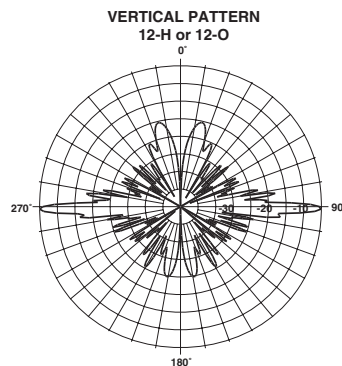
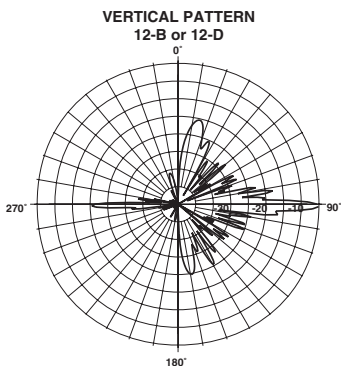
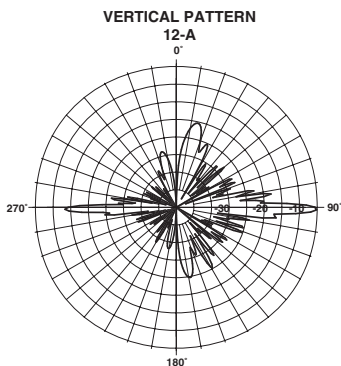
8 dBd



10 dBd



12 dBd





Penetrator™ Antennas

BPS10 Series

746-806 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	746-806
Horizontal Pattern	OmniDirectional
Antenna Type	Fiberglass Omni
Polarization	Vertical
Vertical Beamwidth, deg	5.0
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	4.26 (14)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	25 (55)
Weight with B1 Bracket, kg (lb)	39 (87)
Max Wind Loading Area, m ² (ft ²)	0.446 (4.8)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1 Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
BPS10-O-B1	360	12.1 (10)	Omni

BCR6 Series

824-894 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	824-894
Horizontal Pattern	Directional
Antenna Type	Fiberglass Omni
Polarization	Vertical
Vertical Beamwidth, deg	13
Electrical Downtilt, deg	0
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	1.68 (5.5)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	12 (26)
Weight with B1 Bracket, kg (lb)	26 (58)
Max Wind Loading Area, m ² (ft ²)	0.195 (2.1)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1 Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
BCR6-A-B1	220	10.4 (8.3)	8
BCR6-B-B1	140	12.1 (10)	15
BCR6-D-B1	120	12.4 (10.3)	15
BCR6-H-B1	Dual	11.5 (9.4)	Bi-Directional
BCR6-O-B1	360	8.1 (6)	Omni

Penetrator™ Antennas

BCR8 Series

824-894 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	824-894
Horizontal Pattern	Directional
Antenna Type	Fiberglass Omni
Polarization	Vertical
Vertical Beamwidth, deg	8.5
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	2.44 (8)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	16 (36)
Weight with B1 Bracket, kg (lb)	31 (68)
Max Wind Loading Area, m ² (ft ²)	0.279 (3)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1 Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
BCR8-A-B1	220	12.4 (10.3)	8
BCR8-B-B1	140	14.1 (12)	15
BCR8-D-B1	120	14.4 (12.3)	15
BCR8-H-B1	Dual	13.5 (11.4)	Bi-Directional

BCR10 Series

824-894 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	824-894
Horizontal Pattern	Directional
Antenna Type	Fiberglass Omni
Polarization	Vertical
Vertical Beamwidth, deg	5.0
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	3.96 (13)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	25 (55)
Weight with B1 Bracket, kg (lb)	39 (87)
Max Wind Loading Area, m ² (ft ²)	0.446 (4.8)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1 Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
BCR10-A-B1	220	14.4 (12.3)	8
BCR10-B-B1	140	16.1 (14)	15
BCR10-D-B1	120	16.4 (14.3)	15
BCR10-H-B1	Dual	15.5 (13.4)	Bi-Directional
BCR10-O-B1	360	12.1 (10)	Omni



Penetrator™ Antennas

BCR12 Series

824-894 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	824-894
Horizontal Pattern	Directional
Antenna Type	Fiberglass Omni
Polarization	Vertical
Vertical Beamwidth, deg	3.5
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	6.1 (20)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	42 (92)
Weight with B1 Bracket, kg (lb)	56 (124)
Max Wind Loading Area, m ² (ft ²)	0.706 (7.6)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1 Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
BCR12-A-B1	220	16.4 (14.3)	8
BCR12-B-B1	140	18.1 (16)	15
BCR12-D-B1	120	18.4 (16.3)	15
BCR12-H-B1	Dual	17.5 (15.4)	Bi-Directional
BCR12-O-B1	360	14.1 (12)	Omni

BMR6 Series

806-869 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	806-869
Horizontal Pattern	Directional
Antenna Type	Fiberglass Omni
Polarization	Vertical
Vertical Beamwidth, deg	13
Electrical Downtilt, deg	0
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	1.68 (5.5)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	12 (26)
Weight with B1 Bracket, kg (lb)	26 (58)
Max Wind Loading Area, m ² (ft ²)	0.195 (2.1)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1 Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
BMR6-A-B1	220	10.4 (8.3)	8
BMR6-B-B1	140	12.1 (10)	15
BMR6-D-B1	120	12.4 (10.3)	15
BMR6-H-B1	Dual	11.5 (9.4)	Bi-Directional
BMR6-O-B1	360	8.1 (6)	Omni

Penetrator™ Antennas

BMR8 Series

806-869 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	806-869
Horizontal Pattern	Directional
Antenna Type	Fiberglass Omni
Polarization	Vertical
Vertical Beamwidth, deg	8.5
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	2.44 (8)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	16 (36)
Weight with B1 Bracket, kg (lb)	31 (68)
Max Wind Loading Area, m ² (ft ²)	0.195 (2.1)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1 Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
BMR8-A-B1	220	12.4 (10.3)	8
BMR8-B-B1	140	14.1 (12)	15
BMR8-D-B1	120	14.4 (12.3)	15
BMR8-H-B1	Dual	13.5 (11.4)	Bi-Directional
BMR8-O-B1	360	10.1 (8)	Omni

BMR10 Series

806-869 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	806-869
Horizontal Pattern	Directional
Antenna Type	Fiberglass Omni
Polarization	Vertical
Vertical Beamwidth, deg	5.0
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	3.96 (13)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	25 (55)
Weight with B1 Bracket, kg (lb)	39 (87)
Max Wind Loading Area, m ² (ft ²)	0.446 (4.8)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1 Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
BMR10-A-B1	220	14.4 (12.3)	8
BMR10-B-B1	140	16.1 (14)	15
BMR10-D-B1	120	16.4 (14.3)	15
BMR10-H-B1	Dual	15.5 (13.4)	Bi-Directional
BMR10-O-B1	360	12.1 (10)	Omni



Penetrator™ Antennas

BMR12 Series

806-869 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	806-869
Horizontal Pattern	Directional
Antenna Type	Fiberglass Omni
Polarization	Vertical
Vertical Beamwidth, deg	3.5
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	6.1 (20)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	42 (92)
Weight with B1 Bracket, kg (lb)	56 (124)
Max Wind Loading Area, m ² (ft ²)	0.706 (7.6)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1 Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
BMR12-A-B1	220	16.4 (14.3)	8
BMR12-B-B1	140	18.1 (16)	15
BMR12-D-B1	120	18.4 (16.3)	15
BMR12-H-B1	Dual	17.5 (15.4)	Bi-Directional
BMR12-O-B1	360	14.1 (12)	Omni

BMSL10 Series

806-950 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	806-906
Horizontal Pattern	Directional
Antenna Type	Penetrator
Polarization	Vertical
Vertical Beamwidth, deg	5.0
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	3.96 (13)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	25 (55)
Weight with B1 Bracket, kg (lb)	39 (87)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1 Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
BMSL10-A-B1	220	14.4 (12.3)	8
BMSL10-B-B1	140	16.1 (14)	15
BMSL10-D-B1	120	16.4 (14.3)	15
BMSL10-H-B1	Dual	15.5 (13.4)	Bi-Directional
BMSL10-O-B1	360	12.1 (10)	Omni-Directional

Penetrator™ Antennas

BMSL12 Series

806-950 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	806-906
Horizontal Pattern	Directional
Antenna Type	Penetrator
Polarization	Vertical
Vertical Beamwidth, deg	3.5
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	6.1 (20)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	42 (92)
Weight with B1 Bracket, kg (lb)	56 (124)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1 Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
BMSL12-A-B1	220	16.4 (14.3)	8
BMSL12-B-B1	140	18.1 (16)	15
BMSL12-D-B1	120	18.4 (16.3)	15
BMSL12-H-B1	Dual	17.5 (15.4)	Bi-Directional
BMSL12-O-B1	360	14.1 (12)	Omni-Directional

BPR6 Series

928-960 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	928-960
Horizontal Pattern	Directional
Antenna Type	Penetrator
Polarization	Vertical
Vertical Beamwidth, deg	13
Electrical Downtilt, deg	0
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	1.68 (5.5)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	12 (26)
Weight with B1 Bracket, kg (lb)	26 (58)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1 Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
BPR6-A-B1	220	10.4 (8.3)	8
BPR6-B-B1	140	12.1 (10)	15
BPR6-D-B1	120	12.4 (10.3)	15
BPR6-H-B1	Dual	11.5 (9.4)	Bi-Directional
BPR6-O-B1	360	8.1 (6)	Omni-Directional



Penetrator™ Antennas

BPR8 Series

928-960 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	928-960
Horizontal Pattern	Directional
Antenna Type	Penetrator
Polarization	Vertical
Vertical Beamwidth, deg	8.5
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	2.44 (8)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	16 (36)
Weight with B1 Bracket, kg (lb)	31 (68)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1 Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
BPR8-A-B1	220	12.4 (10.3)	8
BPR8-D-B1	120	14.4 (12.3)	15
BPR8-H-B1	Dual	13.5 (11.4)	Bi-Directional
BPR8-O-B1	360	10.1 (8)	Omni-Directional

BPR10 Series

928-960 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	928-960
Horizontal Pattern	Directional
Antenna Type	Penetrator
Polarization	Vertical
Vertical Beamwidth, deg	5.0
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	3.96 (13)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	25 (55)
Weight with B1 Bracket, kg (lb)	39 (87)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1 Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
BPR10-A-B1	220	14.4 (12.3)	8
BPR10-B-B1	140	16.1 (14)	15
BPR10-H-B1	Dual	15.5 (13.4)	Bi-Directional
BPR10-O-B1	360	12.1 (10)	Omni-Directional

Penetrator™ Antennas

BPR12 Series

928-960 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	928-960
Horizontal Pattern	Directional
Antenna Type	Penetrator
Polarization	Vertical
Vertical Beamwidth, deg	3.5
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	6.1 (20)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	42 (92)
Weight with B1 Bracket, kg (lb)	56 (124)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1 Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
BPR12-A-B1	220	16.4 (14.3)	8
BPR12-H-B1	Dual	17.5 (15.4)	Bi-Directional
BPR12-O-B1	360	14.1 (12)	Omni-Directional

ALG6 Series

450-470 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	450-470
Horizontal Pattern	OmniDirectional
Antenna Type	Fiberglass Omni, Penetrator
Polarization	Vertical
Vertical Beamwidth, deg	13.0
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	2.44 (8)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	16 (36)
Weight with B1 Bracket, kg (lb)	31 (68)
Max Wind Loading Area, m² (ft²)	0.28 (3.0)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1HD Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
ALG6-A-B1	220	10.4 (8.3)	8
ALG6-B-B1	140	12.1 (10)	15
ALG6-O-B1	360	8.1 (6)	Omni



Penetrator™ Antennas

ALG8 Series

450-470 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	450-470
Horizontal Pattern	Directional
Antenna Type	Penetrator
Polarization	Vertical
Vertical Beamwidth, deg	8.5
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	4.0 (13)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	23 (52)
Weight with B1 Bracket, kg (lb)	37.8 (84)
Max Wind Loading Area, m ² (ft ²)	0.46 (4.9)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1HD Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
ALG8-A-B1	220	12.4 (10.3)	8
ALG8-B-B1	140	14.1 (12)	15
ALG8-O-B1	360	10.1 (8)	Omni

ALG10 Series

450-470 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	450-470
Horizontal Pattern	Directional
Antenna Type	Penetrator
Polarization	Vertical
Vertical Beamwidth, deg	5.0
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	6.1 (20)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	41 (92)
Weight with B1 Bracket, kg (lb)	55.8 (124)
Max Wind Loading Area, m ² (ft ²)	0.71 (7.6)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1HD Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
ALG10-A-B1	220	14.4 (12.3)	8
ALG10-B-B1	140	16.1 (14)	15
ALG10-O-B1	360	12.1 (10)	Omni

Penetrator™ Antennas

AMG6 Series

470-494 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	470-494
Horizontal Pattern	OmniDirectional
Antenna Type	Fiberglass Omni, Penetrator
Polarization	Vertical
Vertical Beamwidth, deg	13.0
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	2.44 (8)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	16 (36)
Weight with B1 Bracket, kg (lb)	31 (68)
Max Wind Loading Area, m ² (ft ²)	0.28 (3.0)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1HD Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
AMG6-A-B1	220	10.4 (8.3)	8
AMG6-B-B1	140	12.1 (10)	15
AMG6-O-B1	360	8.1 (6)	Omni

AMG8 Series

470-494 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	470-494
Horizontal Pattern	Directional
Antenna Type	Penetrator
Polarization	Vertical
Vertical Beamwidth, deg	8.5
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	4.0 (13)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	23 (52)
Weight with B1 Bracket, kg (lb)	37.8 (84)
Max Wind Loading Area, m ² (ft ²)	0.46 (4.9)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1HD Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
AMG8-A-B1	220	12.4 (10.3)	8
AMG8-B-B1	140	14.1 (12)	15
AMG8-O-B1	360	10.1 (8)	Omni



Penetrator™ Antennas

AMG10 Series

470-494 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	470-494
Horizontal Pattern	Directional
Antenna Type	Penetrator
Polarization	Vertical
Vertical Beamwidth, deg	5.0
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	6.1 (20)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	41 (92)
Weight with B1 Bracket, kg (lb)	55.8 (124)
Max Wind Loading Area, m ² (ft ²)	0.71 (7.6)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1HD Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
AMG10-A-B1	220	14.4 (12.3)	8
AMG10-B-B1	140	16.1 (14)	15
AMG10-O-B1	360	12.1 (10)	Omni

AHG6 Series

494-512 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	494-512
Horizontal Pattern	OmniDirectional
Antenna Type	Fiberglass Omni, Penetrator
Polarization	Vertical
Vertical Beamwidth, deg	13.0
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	2.44 (8)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	16 (36)
Weight with B1 Bracket, kg (lb)	31 (68)
Max Wind Loading Area, m ² (ft ²)	0.28 (3.0)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1HD Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
AHG6-A-B1	220	10.4 (8.3)	8
AHG6-B-B1	140	12.1 (10)	15
AHG6-O-B1	360	8.1 (6)	Omni

Penetrator™ Antennas

AHG8 Series

494-512 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	494-512
Horizontal Pattern	OmniDirectional
Antenna Type	Fiberglass Omni, Penetrator
Polarization	Vertical
Vertical Beamwidth, deg	8.5
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	4.0 (13)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	23 (52)
Weight with B1 Bracket, kg (lb)	37.8 (84)
Max Wind Loading Area, m ² (ft ²)	0.46 (4.9)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1HD Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
AHG8-A-B1	220	12.4 (10.3)	8
AHG8-B-B1	140	14.1 (12)	15
AHG8-O-B1	360	10.1 (8)	Omni

AHG10 Series

494-512 MHz

ELECTRICAL SPECIFICATIONS

Frequency Range, MHz	494-512
Horizontal Pattern	Directional
Antenna Type	Penetrator
Polarization	Vertical
Vertical Beamwidth, deg	5.0
Electrical Downtilt, deg	0.75
Null Fill, dB	Included
VSWR	< 1.5:1
Maximum Power Input, W	500
Lightning protection	Top Rod Grounded to Base Mount
Connector Type	N Female

MECHANICAL SPECIFICATIONS

Overall Length, m (ft)	6.1 (20)
Diameter, mm (in)	168.3 (6.625)
Weight, kg (lb)	41 (92)
Weight with B1 Bracket, kg (lb)	55.8 (124)
Max Wind Loading Area, m ² (ft ²)	0.71 (7.6)
Rated Wind Speed, km/h (mph)	160 (100)
Radiating Element Material	Aluminum
Element Housing Material	Fiberglass
Mount Type	Bracket
Mounting Hardware	B1HD Bracket

ORDERING INFORMATION

Model Number	Horizontal Beamwidth, deg	Gain, dBi (dBd)	Front-To-Back Ratio, dB
AHG10-A-B1	220	14.4 (12.3)	8
AHG10-B-B1	140	16.1 (14)	15
AHG10-O-B1	360	12.1 (10)	Omni



Penetrator™ Antennas

Notes and Mount Outlines

Mounting Brackets:

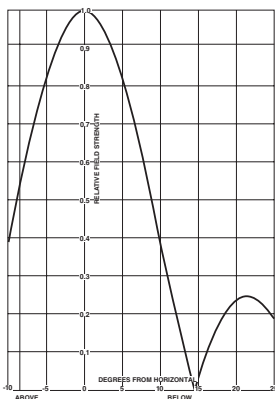
B1 B1 bracket for standard mounting

B1HD B1 bracket for heavy duty

Example: B()R8C-A-B1

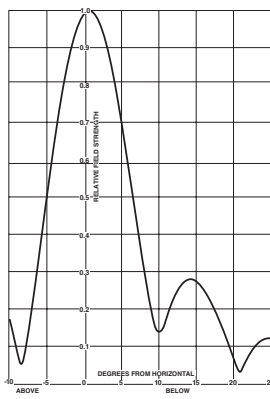
Frequency Gain Options Pattern Mounting Bracket

Vertical Patterns



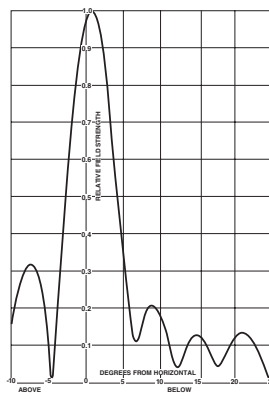
**VERTICAL PATTERN
A()R6**

Beam Tilt - 0.0°
Gain (Main Lobe) - 6.0 dB
Vertical Beamwidth - 13°



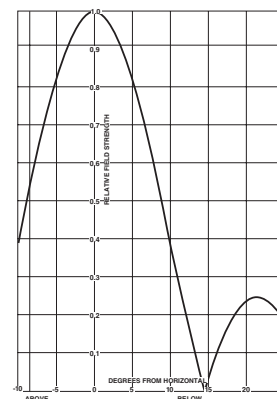
**VERTICAL PATTERN
A()R8**

Beam Tilt - 0.75°
Gain (Main Lobe) - 8.0 dB
Vertical Beamwidth - 8.5°



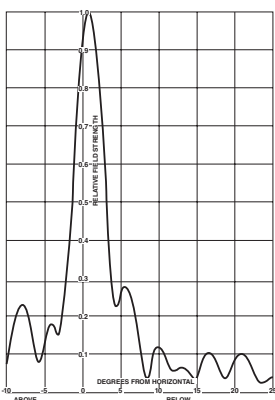
**VERTICAL PATTERN
A()R10**

Beam Tilt - 0.75°
Gain (Main Lobe) - 10.0 dB
Vertical Beamwidth - 5.0°



**VERTICAL PATTERN
B()R6**

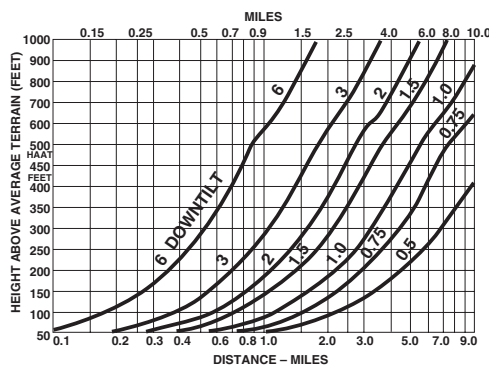
Beam Tilt - 0.0°
Gain (Main Lobe) - 6.0 dB
Vertical Beamwidth - 13°



**VERTICAL PATTERN
B()R12**

Beam Tilt - 0.75°
Gain (Main Lobe) - 12.0 dB
Vertical Beamwidth - 3.5°

Downtilt vs. Antenna Height & Distance



ORDERING INFORMATION

To Order, Specify the Following:

1. Frequency- Model (ALR, AHR, BMR, BCR, BPR, BMS)
2. Gain- Use omnidirectional gain (6, 8, 9, 10, 12)
3. Options- (See option list)*
4. Pattern- A,B,D,H or O
5. Mounting Bracket- B1
6. Specify beamtilt.

PENETRATOR™ OPTIONS*

Option	
L	Gain compensation due to downtilt
J	Field adjustable tilt
E	7/8" EIA Connector
C	LC Connector
S	7-16 DIN Connector
I	Inverted mounting
W	High wind rating
K	High power (1 KW)
3K	High power (3 KW)

*Not all options available on some models.

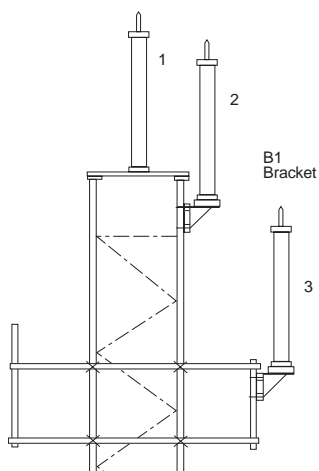
Penetrator™ Antennas

Notes and Mount Outlines

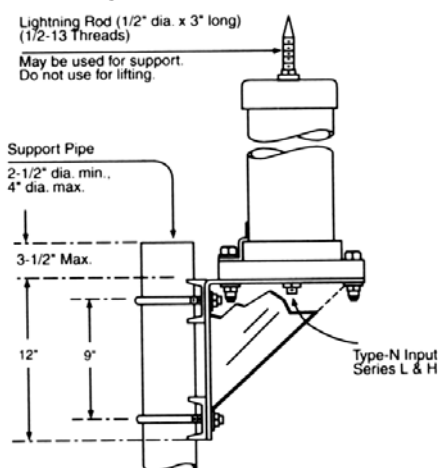
Typical Mounting Configurations

1. **Flange Top Mount**
Mount directly to tower top with eight 3/4 diameter bolts on a 9-1/2" bolt circle. (B1 Bracket).
2. **Tower Leg Top Mount**
Mount directly to tower leg 2-1/2" to 4" in diameter with antenna above top of tower.
3. **Vertical Pole Side Mounts***
Mount to 2-1/2" to 4" diameter pole.
4. **800 MHz Models**
When side mounting this series, a minimum of 4 feet from any metal is required.
5. **400 MHz Models**
When side mounting this series, a minimum of 6 feet from any metal is required.
6. Side mounting assemblies are not available; contact customer service for details.

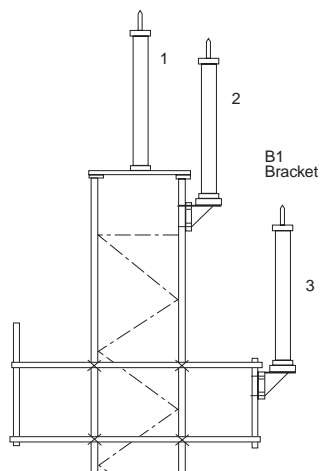
Typical Mounting For 400-500 MHz Models



B1 Mounting Bracket



Typical Mounting For 800 MHz Models



B1 Mounting Bracket

