

Band (VHF) FM Sidemount Antennas

87-108MHz sidemount FM Dipole

These vertically polarized antennas for FM broadcasting applications are intended for use where high efficiency and low wind loading are required. They are designed to be sidemounted to a tower leg or pole and optional mounting brackets are available for this purpose.

Proprietary EmpOp™ software can optimize radiation pattern coverage accounting for tower effects and the use of parasitic elements.

- Rugged construction for maximum Corrosion protection
- Broadband operation
- Multichannel use if required
- Optional pressurization
- Low windload to minimize tower or mast costs
- Vertical polarization

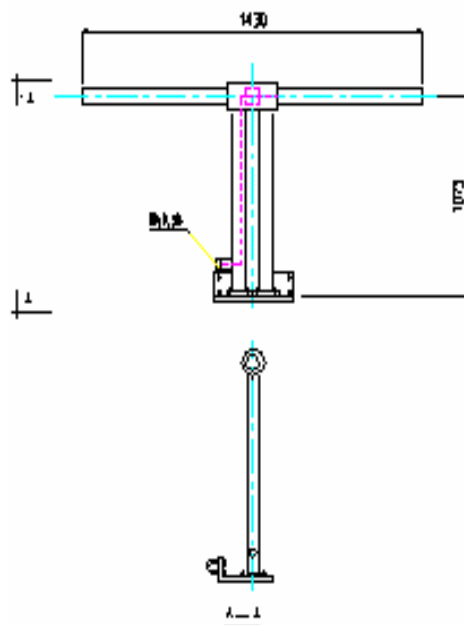
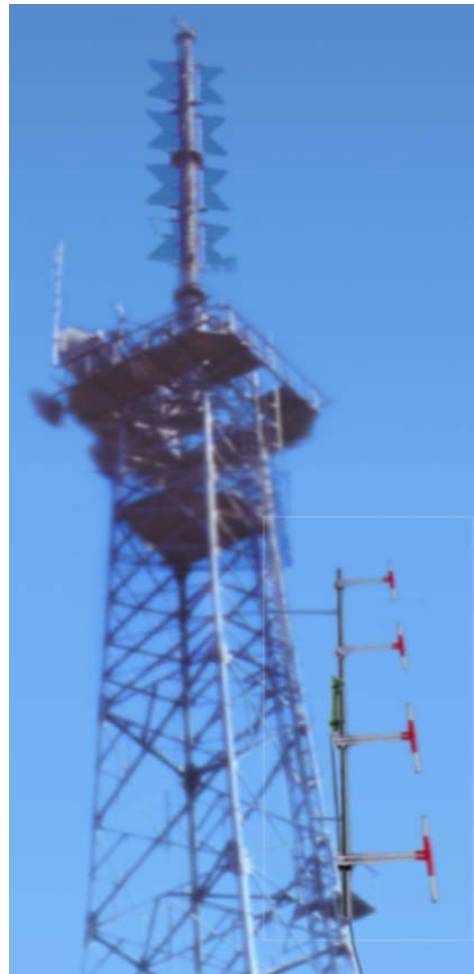
Antenna Design

The antennas are fabricated from stainless steel and will handle up to 20kW input power for the multi-element arrays.

Array Design

Multiple element arrays are supplied as a complete package including power dividers and distribution cables.

An optional input tuner ensures optimum VSWR performance after installation as it accounts for the effects of tower structure. Beam tilt and null fill can be provided on request.



This antenna can be arrayed with 2, 4, 6 or more bays as required.

Product Line	Antenna FM Radio
Product Type	Band II (VHF) FM Sidemount Antennas
Frequency Range, MHz	87 - 108
Polarization	Vertical
Nominal Gain (Mid-band), dBd	0
Azimuth Radiation Pattern	Omni directional + 3 dB Note#1
Return Loss, dB	Typically 20 over 6MHz bandwidth. Tunable within band
Input Connector	7/8" EIA Flange ; 7/16 DIN
Power Rating, kW	2.5
Impedance, Ohms	50 unbalanced
Weight, kg (lb)	12.5
Dimensions (Height/Length), cm	143 Single antenna
Dimensions (Width), cm	17.4 Single antenna
Dimensions (Depth), cm	107.3 Single antenna
Mounting (Standard), mm (in)	Brackets for clamp diameter 43 - 76mm (1-3/4 - 3)
Effective Area Front (full antenna), sq m (sq ft)	0.80 (8.6) Note#3
Effective Area Power Divider, sq m (sq ft)	0.13 (1.4) Note#3
Wind Load @ 50 m/sec Front, kN (kips)	1.10 Note#4 #5
Pressurization, Operational, kPa (psi)	20 - 35 (3 - 5)
Pressurization, Test, kPa (psi)	100 (15)

Features/Benefits

- Rugged construction for maximum corrosion protection
- Broadband operation
- Multichannel use if required
- Optional pressurization
- Low windload to minimize tower or mast costs
- Vertical polarization

Note

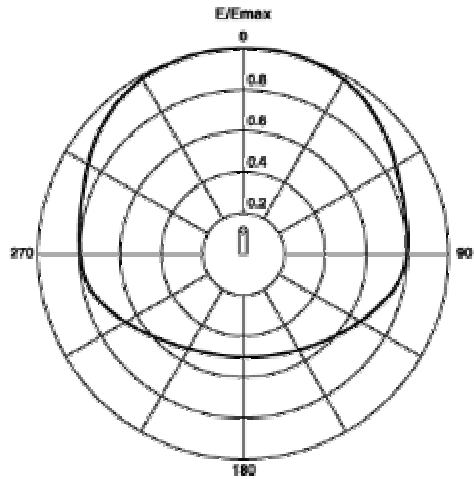
Note 1 When antenna is mounted on a mast/tower with a face width of less than 150mm (5.9").

Note 2 Input power is limited to 2.5kW if a 7/8" connector is used.

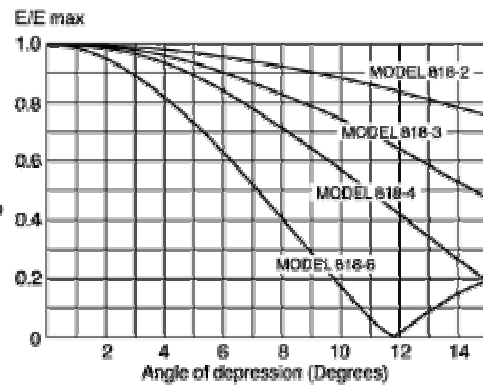
Note 3 Connecting cables are not included in calculations - 0.03sq metres per metre length should be allowed.

Note 4 Power divider included and considered adjacent to antennas.

Note 5 Calculated in accordance with AS1170-1981, Part 2 "SAA Loading Code - Wind Forces".



**Azimuth Radiation
Pattern(Typical)**



Vertical Radiation Pattern