

Exposed Dipole Quasi-Omni Antenna

406 - 512 MHz / 6.6 or 7.8 dBd Gain

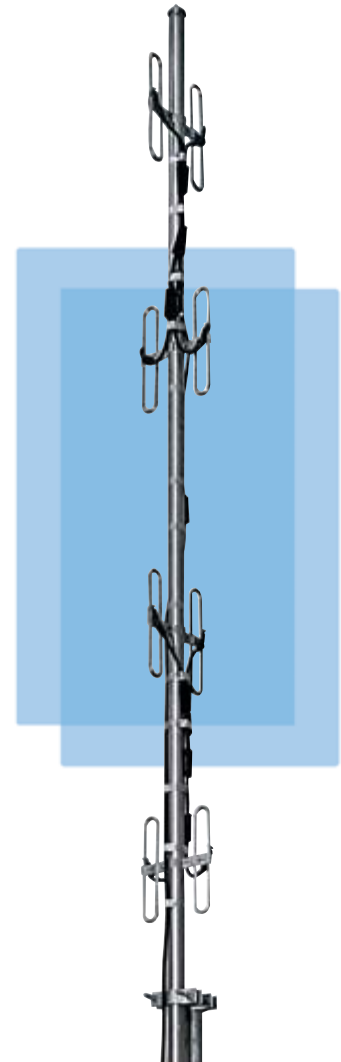
DB 408



30-512 MHz

Two DB404 antennas are combined to form the DB408 antenna with its 4-stack collinear array of dual dipoles.

- **Extremely Rugged** — Resists winds up to 125 mph (201 km/hr).
- **Broad Response** — With 14 to 24 MHz bandwidth, this antenna is suitable for duplex operation.
- **Moisture Resistant** — VAPOR-BLOC® cable harness provides weather protection and assures inphase signal distribution to all elements.
- **Circular Pattern** — DB408 has dual dipoles positioned at 90° angles from each other.
- **Offset Pattern** — DB408L has all dual dipoles mounted in line, collinearly, on the mast.
- **Side Mounting** — Either model can be side mounted, resulting in significantly different patterns.
- **Dual Models** — Two DB404 antennas on the same mast that function independently.
- **Field Changeable** — Patterns can be adjusted with ordinary hand tools.
- **Lightning Resistant** — Radiators operate at DC ground, and the aluminum mast, with its pointed top, provides a low resistance discharge path to the tower or ground system.



● DB408

ELECTRICAL DATA

Frequency Ranges – MHz	A = 406-420, B = 450-470, C = 470-488, D = 488-512, E = 482-494
Bandwidth	Same as above
VSWR	1.5 to 1 or less
Nominal Impedance – Ohms	50
Gain (over half-wave dipole) – dBd	6.6 or 7.8
Rated Power Input – Watts	250
Vertical Beamwidth (half-power)	14°
Decoupling Between Antennas (dual) – dB	30 minimum
Lightning Protection	Direct ground
Standard Termination	Captive Type N-Male attached to end of flexible lead.

MECHANICAL DATA

Mast (aluminum) – in. (mm)	1.75 (44.45) OD with 0.062 (1.575) to 0.125 (3.175) wall
Radiating Elements (aluminum) – in. (mm)	0.375 (9.525) OD with 0.058 (1.473) wall
Maximum Exposed Area (flat plate equivalent) – ft ² (m ²)	1.9 (.177)
Wind Rating:*	
Survival w/o Ice – mph (km/hr)	>125 (201)
Survival with 0.5" (12.7 mm) Radial Ice – mph (km/hr)	85 (137)
Lateral Thrust at 100 mph (161 km/hr) – lbf (N)	76 (338)
Bending Moment at Top Clamp at 100 mph (161 km/hr) – ft. lbs. (kg m)	250 (34.6)
Overall Length (450-470 MHz) – ft. (m)	9.42 (2.87)
Net Weight (w/clamps) – lbs. (kg)	17 (7.71)
Shipping Weight (w/clamps) – lbs. (kg)	29 (13.15)
Mounting Clamps (Galv. steel)	DB365-OS

* Top mounted antenna. Wind rating is greatly increased when antenna is side mounted. Calculation of wind survivability does not include damage due to flying debris.

NOTE: The mechanical specifications are degraded for the antenna covering the 120-150 MHz band.

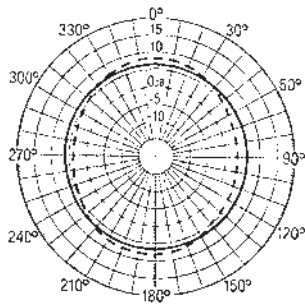
ORDERING INFORMATION

Use model number for correct frequency and specify termination if non-standard. Order DB408 for omni pattern, DB408L for offset Pattern, DB408D* for dual antennas with omni patterns. DB365-OS Clamps are included. Order DB5012 Side Mount Kit if needed. Other size clamps can be special ordered. **Examples:** DB408-B or DB408L-B for 450-470 MHz range. Order jumper cable separately, if desired.

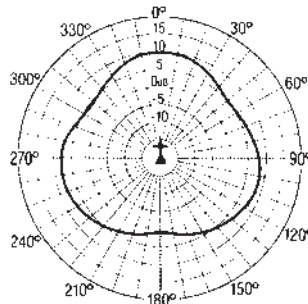
* NOTE: DB408D has two feed lines and each antenna has 3.8 or 5 dBd gain, 406-512 MHz.

SIDE MOUNTING

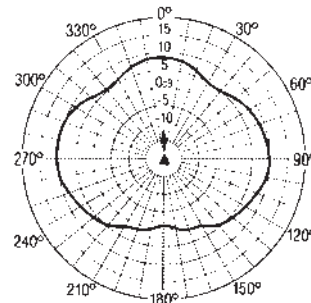
Typical pattern shape of the antenna side mounted on a tower with an 18" (457.2 mm) face. The patterns for 12" (304.8 mm) and 24" (609.6 mm) towers will be similar.



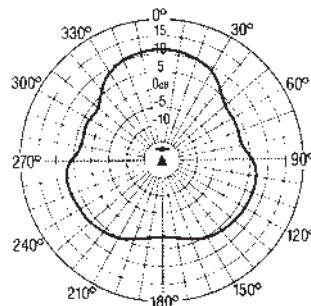
● Horizontal Radiation Pattern
DB408(—) and DB408L(- - -)



● DB408 (Omni) mounted on side of tower



● DB408L elements pointed toward tower



● DB408L elements broadside to tower