

Exposed Dipole Quasi-Omni Antenna

406 - 512 MHz / 3.8 or 5 dBd Gain

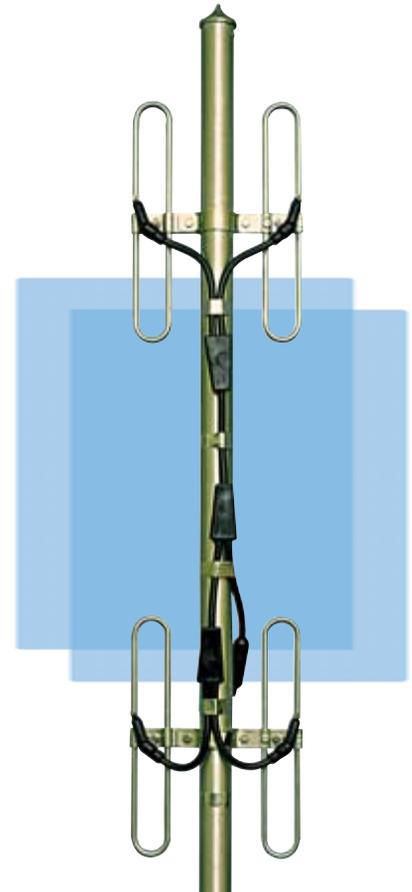
DB 404



30-512 MHz

The DB404, with its 2-stack collinear array of dual dipoles, provides a broad bandwidth that allows the antenna to be ordered in advance of frequency assignment.

- **Extremely Rugged** — Resists winds up to 125 mph (201 km/hr).
- **Broad Response** — With 14 to 24 MHz bandwidth, the DB404 is highly suitable for duplex operation.
- **Moisture Resistant** — VAPOR-BLOC® cable harness provides weather protection and assures inphase signal distribution to all elements.
- **Circular Pattern** — DB404 has the dual dipoles at the top aligned at a 90° angle from the dual dipoles at the bottom.
- **Offset Pattern** — DB404L has all dual dipoles in line, collinearly, along the mast.
- **Side Mounting** — Either model can be side mounted, resulting in significantly different patterns.
- **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.



● DB404L

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	3.8 or 5
Rated Power Input – Watts	250
Vertical Beamwidth (half-power)	27°
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)	1.14 (28.96)
Wind Rating:*	
Survival w/o Ice – mph (km/hr)	100 (161)
Survival with 0.5" (12.7 mm) Radial Ice – mph (km/hr)	over 90 (145)
Lateral Thrust at 100 mph (161 km/hr) – lbf (N)	45.6 (202.8)
Bending Moment at Top Clamp at 100 mph (161 km/hr) – ft. lbs. (kg m)	62 (8.58)
Overall Length (450-470 MHz) – ft. (m)	5 (1.52)
Net Weight (w/clamps) – lbs. (kg)	14 (6.35)
Shipping Weight (w/clamps) – lbs. (kg)	24 (10.89)
Mounting Clamps (Galv. steel)	DB365-OS

* Calculation of wind survivability does not include damage due to flying debris.

Note: The mechanical specifications are slightly degraded for the antenna covering the 406-420 MHz band.

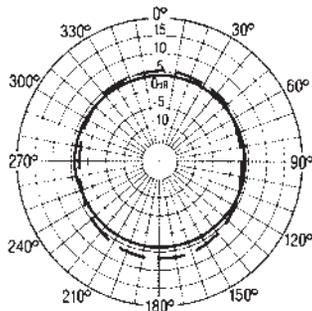
ORDERING INFORMATION

Use model number for correct frequency and specify termination if non-standard. Order DB404 for omni pattern, DB404L for offset pattern. DB365-OS Clamps are included. Order DB5007 Side Mount Kit if needed. Other size clamps can be special ordered.

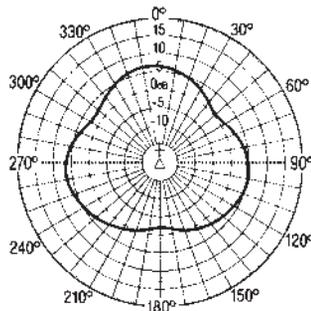
Example: DB404-B, DB404L-B for 450-470 MHz range. Order jumper cable separately, if desired.

SIDE MOUNTING

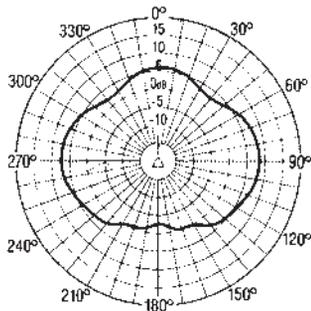
Typical pattern shape of the antenna side mounted on a tower with an 18" (457.2 mm) face. The patterns for 12" (304.8 mm) and 24" (609.6 mm) towers will be similar.



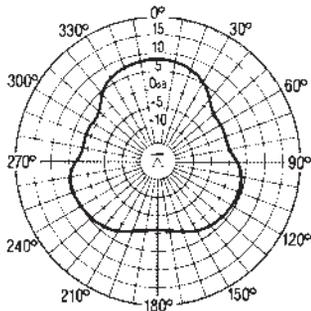
● Horizontal Radiation Pattern
DB404(—) and DB404L(---)



● DB404 (Omni) mounted on side of tower



● DB404L elements pointed toward tower



● DB404L elements broadside to tower