



## WATTS ANTENNA COMPANY



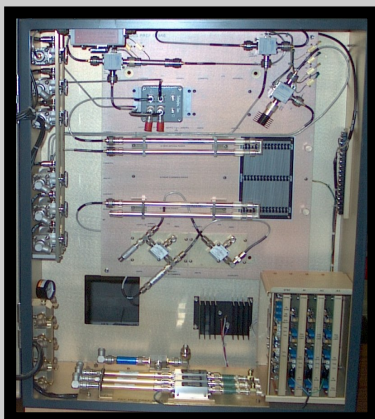
*Sole Source Provider of  
EFGS Antennas!*

### MODEL 106 END-FIRE GLIDE SLOPE (EFGS) ANTENNA

*CATEGORY I INSTRUMENT LANDING SYSTEM*

**THE EF-9 INTERFACE UNIT PROVIDES POWER DISTRIBUTION AND MONITORING FOR THE ANTENNA SYSTEM**

**(Designed to be Easily Adapted to any Transmitter & Monitor Electronics)**



**A PROVEN FRANGIBLE SUPPORT STRUCTURE**  
*(Front antenna shown)*



**Have you been told that you cannot get ILS service at your airport because the site is too difficult? Throw that old report away! We don't believe it and let us tell you why!**

**End-Fire antennas can offer numerous benefits over conventional image systems:**

*Significant Cost Savings by Avoiding Expensive Ground Plane Conditioning.*

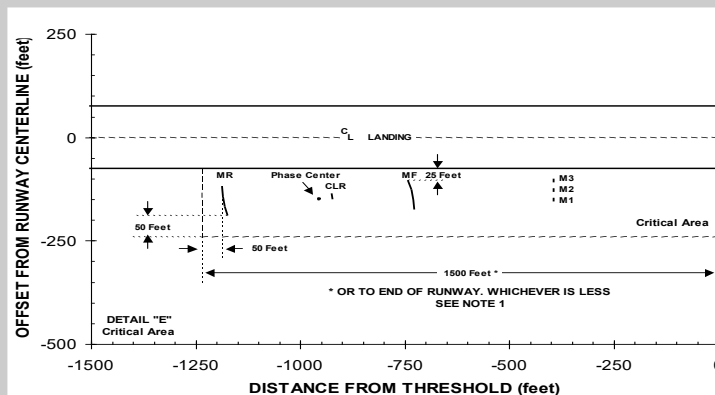
*Provide ILS Service where Previously not Possible or Cost Effective due to Terrain.*

*Proven Frangible Low-Profile Design Permitting "Next to Runway" Installation.*

*Save the Wetlands or Avoid High Wetland Relocation Costs.*

*Waterside Installations Since the Signal is not Degraded by Tidal Variations.*

**Precision Glide Path Guidance is Achieved with Narrow Lateral Radiation Patterns that Reduce Multi-path Signals from Buildings or Mountainous Terrain.**



### What About Improvements to Airport Efficiency?

**The End-Fire Critical Area Size is Substantially Smaller & can mean more operations per hour!**

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70 NORTH PLAINS ROAD, SUITE H

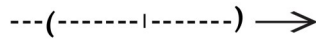
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... *World Leader In Advanced ILS Antennas*

## MODEL 106 END-FIRE GLIDE SLOPE ANTENNA

Frequency Range	329 to 335 MHz
Excitation:	
CSB	4.0 W (typical)
SBO	100 to 500 mW (as required)
CLR	400 mW to 2.5 W (as required)
Input Impedance	50 ohms
VSWR:	
Main Antenna	1.25:1
Clearance Antenna	2.0:1
Pressurization	Dry air, constant, 3 to 9 PSI, nominal (stable pressure preferred)
System Air Volume	6.60 cu. ft. (186.9 liters) (approximate) with specified dielectric coaxial cables
Dehydrator Run Time	7.5 minutes (Andrew MT300 only) 1.4 hours in a 24-hour period (Andrew MT300 only)
Dehydrator Idle Time	2.1 hours between cycles (Andrew MT300 only) 22.6 hours in a 24-hour period (Andrew MT300 only)
Radiation Pattern:	
Main Antenna	-2 dB beamwidth > 5 deg. azimuth -10 dB beamwidth < 20 deg. azimuth Front to back ratio > 12 dB
Clearance Antenna	Maximum lateral radiation nominally -19 degrees and 11 degrees relative to the runway centerline with a null in the region of main antenna maximum radiation. Front to back ratio > 12 dB
Glide Angle	2.5 to 4.0 degrees relative to horizontal (adjustable)
Path Width	0.70 degree (Nominal)
Power Requirement	22-30 VDC, (nominal 28 VDC) @ 0.78 amp
Duty Cycle	Continuous, unattended
Outdoor Equipment:	
Temperature	-50 to + 70 degrees C
Relative Humidity	5 to 100 percent
Altitude	0 to 10,000 feet
Wind	0 to 100 mph
Ice Loading	1 inch radial clear ice
Indoor Equipment:	
Temperature	-10 to +50 degrees C
Relative Humidity	5 to 90 percent
Altitude	0 to 10,000 feet