

Pedestals, Controllers and Antenna Systems



Enterprise Electronics Corporation (EEC) has manufactured high reliability pedestals, pedestal controllers and complete antenna systems for a wide variety of applications including radar and satellite systems since 1971. EEC pedestals are operational all over the United State and in over 80 countries throughout the world. In fact, the EEC F28SM1 was chosen by the U.S National Weather Service as the antenna system for the new generation radar systems purchased to supplement the existing NEXRAD network.

The aluminum or steel antenna / pedestal systems are manufactured for precision and reliability using modular components. Some of the options available include:

- High resolution position reporting devices
- Limit switches
- Universal Pedestal Control Module
- Slip ring unit
- Servo Amplifiers
- Waveguide components

All EEC pedestals use precision quality planetary gearboxes, coupled to high torque motors, which in turn are coupled to the payload through an AGMA 10 Quality pinion gear. The motors can be either DC brushless or brush type. A high stiffness combination of angular contact bearings supports payload motion in each axis. A modular slip ring package is available that has been field proven for reliability and performance at hundreds of weather radar sites worldwide.

Position reporting in both azimuth and elevation is provided by either synchros, optical encoders or resolvers.

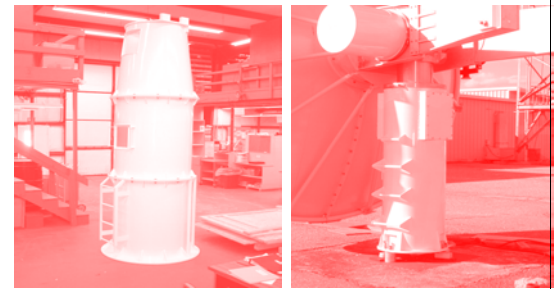
Most EEC pedestals are Ethernet appliances using standard Ethernet cables, fiber optics or wireless devices for communications.

Waveguide or coaxial components are available in any standard frequency range.



Pedestal Specifications

	Light Duty (EEC B-Series)	Medium Duty (EEC D-Series)	Heavy Duty (EEC F-Series)
Type	EL over AZ met and / or track	EL over AZ met and / or track	EL over AZ met and / or track
Antenna Size Range	4 to 8 ft.	10 to 20 ft.	16 to 28 ft.
Controls	DC Servo Drive, AZ & EL	DC Servo Drive, AZ & EL	DC Servo Drive, AZ & EL
Max Scan Velocity	6 RPM	6 RPM	6 RPM (14 RPM optional)
Travel, AZ	Continuous CW or CCW	Continuous CW or CCW	Continuous CW or CCW
Travel, EL	-2° to 90°	-2° to 90°	-2° to 182°
EL Limit Switches	Software switches	Switches settable -2° to 90°	Primary and secondary switches settable -4° to 184°
EL Mechanical Stops	-3°	-3° and +94°	-8° and +189°
Pointing Accuracy	0.1°	0.1°	0.1°
Drive Train AZ & EL	Motor: DC Servo Motor, PWM control Gearbox: Totally enclosed, planetary gear system, grease lubricated Final Stage: Bull gear and pinion gear. Gears and bearings have grease fittings for lubrication	Motor: DC Servo Motor, PWM control Gearbox: Totally enclosed, planetary gear system, grease lubricated Final Stage: Bull gear and pinion gear. Gears and bearings have grease fittings for lubrication	Motor: DC Servo Motor Gearbox: Totally enclosed, grease lubricated Final Stage: Internal bull & external spur gears with grease fittings
Lubrication Interval	Semi-Annual	Semi-Annual	Semi-Annual
Overload Protection	Electrical limiting	Electrical limiting	Electrical limiting
Data Package AZ & EL	Single speed size 18 synchro transmitter with antibacklash gears. Dual speed synchros optional	Single speed size 18 synchro transmitter with antibacklash gears. Dual speed synchros optional	Single speed size 18 synchro transmitter with antibacklash gears. Dual speed synchros optional
Slew Rate	EL 36°/sec AZ 36°/sec	EL 36°/sec AZ 36°/sec	EL 36°/sec AZ 36°/sec
Acceleration Rate	EL 15°/sec ² AZ 15°/sec ²	ED 15°/sec ² AZ 15°/sec ²	ED 15°/sec ² AZ 15°/sec ²
Leveling Provision	Azimuth leveling vial. Jack screws at riser base	Azimuth leveling vial. Jack screws at riser base	Azimuth leveling vial. Jack screws at riser base
Service Access	Sealed access doors	Sealed access doors	Sealed access doors
Safety Doors	Antenna movement and RF radiation disable switches at base of riser	Antenna movement and RF radiation disable switches at base of riser	Antenna movement and RF radiation disable switches at base of riser
Finishes	Mil-Spec polyurethane paint	Mil-Spec polyurethane paint	Mil-Spec polyurethane paint
Documentation	Operating & maintenance manual (English)	Operating & maintenance manual (English)	Operating & maintenance manual (English)



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