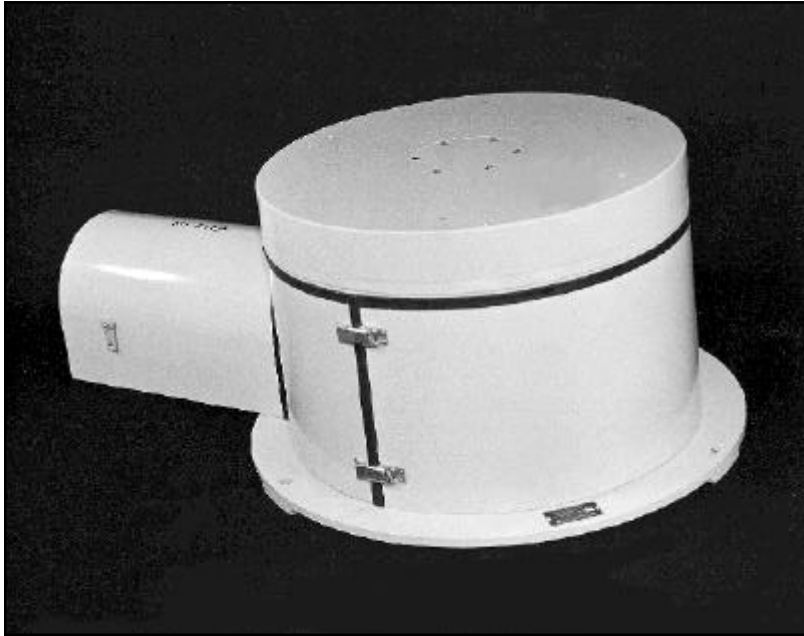


# ROTATORS

- ACCURATE POSITIONING
- HEAVY DUTY
- COMPUTER CONTROL MODELS



## AR-7

### Applications

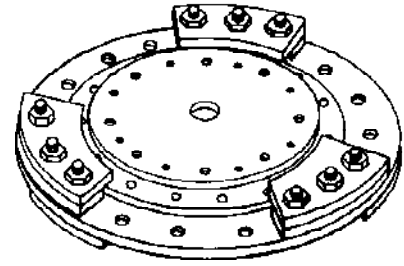
Antenna Products azimuth positioners are designed to rotate directional antennas to a desired heading using a remote control. The direction of the antenna can be set in 30° segments with a step control or at any azimuth from 0°-360° using a synchro control.

### Features

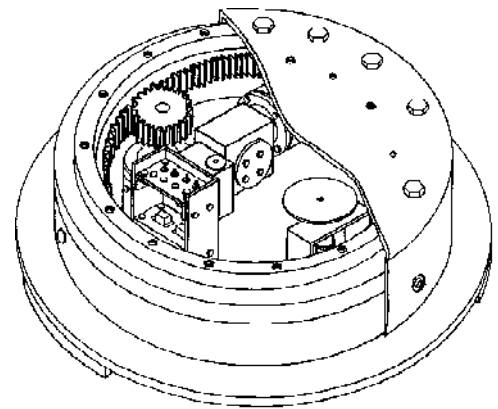
The rotators are used in a wide variety of hostile environments and have rugged gear drives to handle high inertial loads. The rotators are designed to mount on a wide variety of towers. Reliability and low maintenance are prime features of our rotator systems.

### Characteristics

Antenna Products rotator designs accommodate large HF log periodic antennas which impose tremendous horizontal and vertical loads when subjected to the maximum-rated wind speed and ice loading. Some rotator models have microcomputers which give continuous update of status and can accept commands to seek new azimuth direction via land line, radio link or RS-232 interface.



AR-57



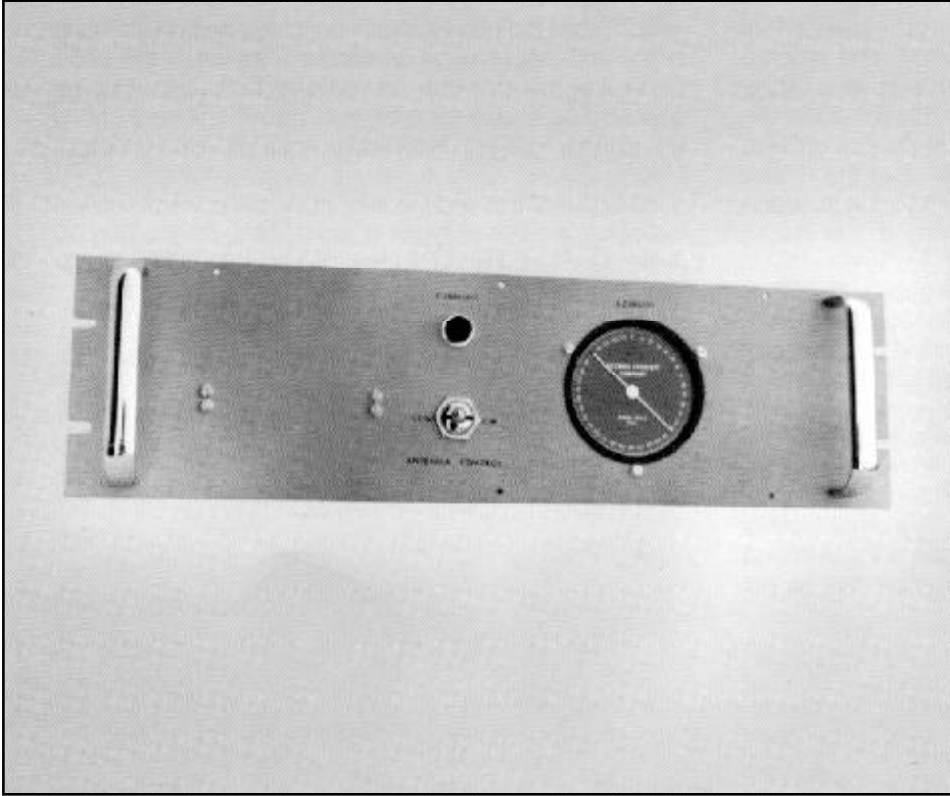
AR-58

## SPECIFICATIONS

MODEL	AR-7	AR-22	AR-23	AR-57	AR-58	AR-59
Torque	12,000 in/lbs	22,000 in/lbs	40,000 in/lbs	N/A	48,000 in/lbs	18,000 in/lbs
Horizontal Load	10,000 lbs	4,000 lbs	9,000 lbs	15,000 lbs	15,000 lbs	2,000 lbs
Vertical Load	10,000 lbs	1,300 lbs	3,000 lbs	25,000 lbs	25,000 ft/lbs	1,500 lbs
Overturning Moment	10,000 ft/lbs	2,500 ft/lbs	6,000 ft/lbs	100,000 ft/lbs	100,000 ft/lbs	4,000 ft/lbs
Rotating Speed	0-2.5 rpm	1.0 rpm	0.3 rpm	Manual	0-0.5 rpm	0.3 rpm
Input Power*	/1 105/135V, 1Ø 48/62 Hz	120V, 1Ø 60 Hz	120V, 1Ø 60 Hz	N/A	105/135V, 1Ø 48/62 Hz	120V, 1Ø 60 Hz
	/2 N/A	208V, 3Ø 50/60 Hz	208V, 3Ø 50/60 Hz	N/A	N/A	208V, 3Ø 50/60 Hz
	/3 N/A	240V, 1Ø 50/60 Hz	240V, 1Ø 50/60 Hz	N/A	N/A	240V, 1Ø 50/60 Hz
	/4 N/A	380V, 3Ø 50/60 Hz	380V, 3Ø 50/60 Hz	N/A	N/A	380V, 3Ø 50/60 Hz
Control*	20°-740°	12 position or continuous	12 position or continuous	Manual	0°-400°	Continuous
Approximate Shipping Weight	609 lbs	1,200 lbs	1,600 lbs	1,130 lbs	1,706 lbs	230 lbs
Approximate Shipping Volume	16.7 cu ft	30 cu ft	48.5 cu ft	12.5 cu ft	19.9 cu ft	9 cu ft
Military Nomenclature	SSAR-548	—	—	AB-1315/G	AB-1316/G	—

\*Customer must specify input power and desired control when ordering or requesting quotations.

# ROTATOR CONTROLS



Antenna Products manufactures three types of remote control units for steering directional antennas to proper azimuth position. These are:

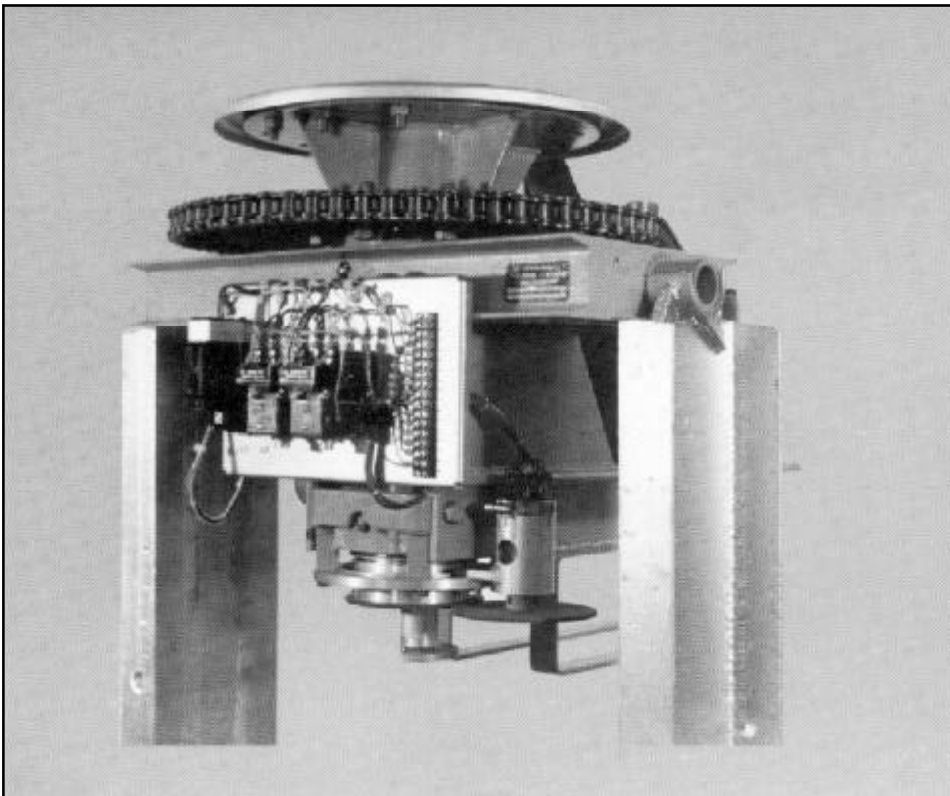
- 1) Step Controller
- 2) Synchro Controller and
- 3) Computer Controller

## **Step Controller**

The Step Controller utilizes a rotary switch to provide twelve cardinal headings that are selectable from the remote control. The twelve headings are equally spaced in azimuth. Once a heading is selected, the drive system automatically positions the antenna to the desired azimuth. A local/remote switch is provided on the local control at the base of the antenna to permit local selection of azimuth heading.

## **Synchro Controller**

The Synchro Controller uses a transmit synchro in the rotator and a receive synchro in the remote control to indicate the antenna bearing. The operator energizes the drive system at the remote control unit to steer the antenna to the desired heading. Units are available that provide an additional synchro at the base of the antenna to indicate the position from the local control.



  
**ANTENNA PRODUCTS**

# ROTATOR CONTROLS

(CONTINUED)

## Computer Controller

The Computer Controller operates on systems that employ a synchro for position information. The synchro signal is converted to digital and compared to a digital rotate command. A difference between position and command closes a contact on an optical output coupler to operate a contactor at the antenna to drive the rotator in either a CW or CCW direction. When the antenna reaches the commanded azimuth bearing, the output coupler opens and rotation stops. The computer interface is user-selectable RS-232 or RS-422 serial. Each control unit is separately addressable, allowing several antennas to be controlled by one computer. The computer may be hardwired to the control or may employ modems and telephone lines. Two types of Computer Controllers are available. One type is used with antennas with rotary joints and, therefore, has no rotational limits. The unit will command movement in the direction of least rotation. The other type of unit has provisions for limit signals and will command rotation to a new bearing in the direction that is not impeded by a

limit. Both units are provided with an interlock so that control of the antenna may be denied by a switch in the Local Control at the antenna. Additionally, both units may be operated by a keypad on the front panel. The units mount in a standard 19-inch rack and utilize 5.25 inches of panel height. Because of the wide variety of prime power interface capability as well as types of controllers, please contact Antenna Products for further information and proper selection.

