

The DCR-S/HDR-S has been used extensively for high power broadband applications. The "S" series antennas are circularly polarized with a power rating of 28 kW for a single bay and is available in stacked arrays of up to 16 bays with an input rating to 120 kW. For situations where ice formation is common, the arrays can be equipped with optional electrical deicers or radomes. The antenna is DC grounded and does not require shorting stubs. Each array is supplied with an input fine matcher for field optimization. For reduced downward radiation, the use of a custom feed design allows for shorter spacings in a series fed configuration.

### High Power Input Capability

Designed to handle high input power ideally suited for multiplexing. The "S" series antenna is available with optional 4-1/16" feed system having a power input rating (for five or more bays) of 70 kW. Arrays with 6-1/8" inputs are also available.

### Multi-Station Operation

The wide bandwidth and the high power input capability of the "S" series antenna permits optional multi-station operation.

### Beam Tilt and Null Fill

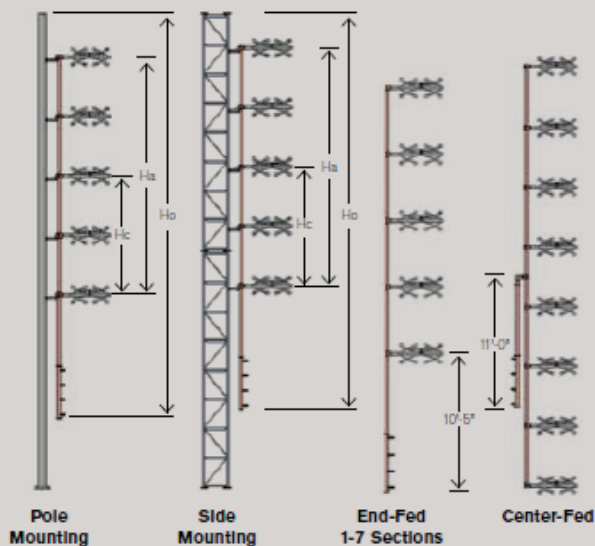
Beam tilt and/or null fill are available options. These options are ordinarily specified for arrays of 8 bays or more. Even numbered arrays of six sections and fewer may include one or both options and typically are designed as a center-fed array. The "S" series antenna is available in directional arrays which are custom-built to the needs of the station.

### Quadrapole Design

The four-dipole-per-element design offers the advantage of more symmetrical azimuth pattern performance and H/V ratio than dual dipole designs, providing more robust coverage.

### Elevation:

#### Mounting Dimensions



### Specifications:

- DCR-M: Right Hand Circularly Polarized
- HDR-M: Left Hand Circularly Polarized
- DCR-M/HDR-M IBOC compatible
- Interleaved provides -40dB of isolation
- Stainless steel elements
- Ideal for Class B and C stations
- Multi-station DCR Antennas
- DCR-S / HDR-S
- 28 kW for a single bay
- Fine matcher included
- Radomes or integral deicers optional
- VSWR field adjustable
- High power bays for multiplexing high power signals
- High peak power ratings

### Electrical Specifications

Antenna Type DCR-S or HDR-S	Gain Polarization Spacing (Spacing Power Gain	Gain Polarization Spacing (Spacing dB	Gain Polarization Spacing 1/2(Spacing Power Gain	Gain Polarization Spacing 1/2(Spacing dB	- - Power Rating kW
DCR-S1	0.46	-3.37	-	-	28
HDR-S1	0.46	-3.37	-	-	28
DCR-S2	1	0	0.7	-1.55	40
HDR-S2	1	0	0.7	-1.55	40
DCR-S3	1.5	1.76	1	0	40
HDR-S3	1.5	1.76	1	0	40
DCR-S4	2.1	3.22	1.3	1.14	40
HDR-S4	2.1	3.22	1.3	1.14	40
DCR-S5	2.7	4.31	1.6	1.76	40
HDR-S5	2.7	4.31	1.6	1.76	40
DCR-S6	3.2	5.05	1.8	2.55	40
HDR-S6	3.2	5.05	1.8	2.55	40
DCR-S7	3.8	5.8	2.1	3.22	40
HDR-S7	3.8	5.8	2.1	3.22	40
DCR-S8	4.3	6.34	2.3	3.62	40
HDR-S8	4.3	6.34	2.3	3.62	40
DCR-S10	5.5	7.4	2.9	4.62	40
HDR-S10	5.5	7.4	2.9	4.62	40
DCR-S12	6.6	8.2	3.5	5.44	40
HDR-S12	6.6	8.2	3.5	5.44	40

Mechanical Specifications

Antenna Type	# of Bays	Without Radomes				With Radomes				With Deicers			
		Weight (lbs) (Spaced 1/2(Spaced)	CaArc ft <sub>2</sub> 1/2(Spaced)	Weight (lbs) (Spaced)	CaArc ft <sub>2</sub> (Spaced)	Weight (lbs) 1/2(Spaced)	CaArc ft <sub>2</sub> (Spaced)	Weight (lbs) (Spaced)	CaArc ft <sub>2</sub> 1/2(Spaced)	Weight (lbs) 1/2(Spaced)	CaArc ft <sub>2</sub> (Spaced)	Weight (lbs) (Spaced)	CaArc ft <sub>2</sub> 1/2(Spaced)
DCR-S1	1	198	7.2	335	11.2	197	-	7.7	-	-	-	-	-
HDR-S1	1	198	7.2	335	11.2	197	-	7.7	-	-	-	-	-
DCR-S2	2	322	14.1	607	22.1	332	20.6	15.1	317	20.6	332	15.1	13.6
HDR-S2	2	322	14.1	607	22.1	332	20.6	15.1	317	20.6	332	15.1	13.6
DCR-S3	3	451	21	879	33	466	30	22.5	436	30	466	22.5	19.5
HDR-S3	3	451	21	879	33	466	30	22.5	436	30	466	22.5	19.5
DCR-S4	4	581	27.9	1151	43.9	601	39.4	29.9	556	39.4	601	29.9	25.4
HDR-S4	4	581	27.9	1151	43.9	601	39.4	29.9	556	39.4	601	29.9	25.4
DCR-S5	5	710	34.8	1423	54.9	735	48.9	37.3	675	48.9	735	37.3	31.3
HDR-S5	5	710	34.8	1423	54.9	735	48.9	37.3	675	48.9	735	37.3	31.3
DCR-S6	6	840	41.7	1695	65.8	870	58.3	44.7	795	58.3	870	44.7	37.2
HDR-S6	6	840	41.7	1695	65.8	870	58.3	44.7	795	58.3	870	44.7	37.2
DCR-S7	7	969	48.5	1967	76.6	1004	67.6	52	914	67.6	1004	52	43
HDR-S7	7	969	48.5	1967	76.6	1004	67.6	52	914	67.6	1004	52	43
DCR-S8	8	1142	55.7	2239	87.8	1182	77.3	59.7	1033	77.3	1182	59.7	49.2
HDR-S8	8	1142	55.7	2239	87.8	1182	77.3	59.7	1033	77.3	1182	59.7	49.2
DCR-S10	10	1401	69.5	2753	110	1451	96.5	74.5	1286	96.5	1451	74.5	61
HDR-S10	10	1401	69.5	2753	110	1451	96.5	74.5	1286	96.5	1451	74.5	61
DCR-S12	12	1660	83.3	3267	131	1720	115	89.3	1555	115	1720	89.3	72.8
HDR-S12	12	1660	83.3	3267	131	1720	115	89.3	1555	115	1720	89.3	72.8