

Specifications:

- Variable spacing
- Broad bandwidth capability
- Array input power 100kW or more
- Series fed for multi-station operation
- Circularly polarized
- Stainless steel construction
- Low ice sensitivity
- Fine matcher included
- Match bay spacing to existing tower for more consistent pattern results
- Radomes/deicers available

Variable Bay Spacing

Through the use of a series feed system, proper RF phase to each bay is maintained, even at reduced bay spacings. This allows for bay spacings between 1/2 and full wavelength. The reduction in bay spacing can have multiple benefits including: 1) A significant reduction in the amount of "downward" radiation. 2) Broader elevation beam. 3) More constant patterns. It must be noted that reducing the bay spacing for a given number of bays also reduces the gain. An 8 bay with full wavelength spacing has a gain of 4.3x. The elevation pattern of an 8 bay half wavelength with a gain of 2.4x resembles the elevation pattern of a 4 bay full wavelength in terms of beam width and gain. A variety of bay spacing is available; contact factory for details.

High Power Input Capability

The DCR-M is designed with input line sizes up to 6-1/8" EIA. This allows for array input power levels in excess of 100kW.

Beam Tilt and Null Fill

Beam tilt and/or null fill are options typically offered in arrays of eight bays or more, however they may also be utilized on smaller arrays.

Directional Arrays

The DCR-MFE antenna is available in directional arrays which are custombuilt to the needs of the specific station.

Multi-Station Operation

The high power handling and wideband characteristics of the DCR-MFE make this antenna an excellent alternative to high cost panel antennas. To aid in selecting the elevation pattern most suitable to your application, please visit our website and download Dielectric's Antenna Planning software.

Electrical Specifications

Antenna Type DCR-S or HDR-S	Gain Polarization Spacing (Power Gain)	Gain Polarization Spacing (dB)	Gain Polarization Spacing 1/2 (Power Gain)	Gain Polarization Spacing 1/2 (dB)	Power Rating kW
DCR-MFE4	1.8	2.55	2.1	3.22	40
DCR-MFE6	2.7	4.31	3.1	4.91	40
DCR-MFE8	3.6	5.56	4.1	6.12	40
DCR-MFE10	4.5	6.53	5.1	7.08	40
DCR-MFE12	5.4	7.32	6.1	7.85	40

Mechanical Specifications

Antenna Type	# of Bays	W/O		W/O		W/O		W/O		With Radomes		With Radomes		With Deicers		With Deicers	
		Weight (lbs) (Spaced)	Weight (lbs) (Spaced)	CaPc (ft) 3/4 (Spaced)	CaPc (ft) 3/4 (Spaced)	CaPc (ft) 1/8 (Spaced)	CaPc (ft) 1/8 (Spaced)	Weight (lbs) 3/4 (Spaced)	Weight (lbs) 1/8 (Spaced)	CaPc (ft) 3/4 (Spaced)	CaPc (ft) 1/8 (Spaced)	Weight (lbs) 3/4 (Spaced)	Weight (lbs) 1/8 (Spaced)	CaPc (ft) 3/4 (Spaced)	CaPc (ft) 1/8 (Spaced)	Weight (lbs) 3/4 (Spaced)	Weight (lbs) 1/8 (Spaced)
DCR-M2	2	277	280	12.1	12.5	12.5	18.4	812	562	565	21.3	21.7	287	290	13.1	13.5	
HDR-M2	2	277	280	12.1	12.5	12.5	18.4	812	562	565	21.3	21.7	287	290	12.1	13.5	
DCR-M3	3	384	391	17.6	18.4	18.4	819	812	819	31.4	32.2	399	406	19.1	19.9		
HDR-M3	3	384	391	17.6	18.4	18.4	819	812	819	31.4	32.2	399	406	19.1	19.9		
DCR-M4	4	492	502	23.1	24.3	24.3	1062	1062	1072	41.5	42.7	512	522	25.1	26.3		
HDR-M4	4	492	502	23.1	24.3	24.3	1062	1062	1072	41.5	42.7	512	522	25.1	26.3		
DCR-M5	5	600	613	28.6	30.2	30.2	1412	1412	1426	51.7	53.3	624	638	31.1	32.7		
HDR-M5	5	600	613	28.6	30.2	30.2	1412	1412	1426	51.7	53.3	624	638	31.1	32.7		
DCR-M6	6	707	724	34.2	36.2	36.2	1562	1562	1579	61.9	63.9	737	754	37.2	39.2		
HDR-M6	6	707	724	34.2	36.2	36.2	1562	1562	1579	61.9	63.9	737	754	37.2	39.2		
DCR-M7	7	814	835	39.6	42	42	1812	1812	1833	71.9	74.3	849	870	43.1	45.5		
HDR-M7	7	814	835	39.6	42	42	1812	1812	1833	71.9	74.3	849	870	43.1	45.5		
DCR-M8	8	965	989	45.4	48.2	48.2	2062	2062	2086	82.3	85.1	1005	1029	49.4	52.2		
HDR-M8	8	965	989	45.4	48.2	48.2	2062	2062	2086	82.3	85.1	1005	1029	49.4	52.2		
DCR-M10	10	1180	1211	56.4	60	60	2532	2532	2563	102.9	106.5	1230	1260	61.4	65		
HDR-M10	10	1180	1211	56.4	60	60	2532	2532	2563	102.9	106.5	1230	1260	61.4	65		
DCR-M12	12	1395	1433	67.4	71.8	71.8	3002	3002	3040	122.3	126.7	1455	1493	73.4	77.8		
HDR-M12	12	1395	1433	67.4	71.8	71.8	3002	3002	3040	122.3	126.7	1455	1493	73.4	77.8		