

Antenna Specification Sheet

RF Performance

Antenna Part Number		CKA 66	CKA 75	CKA 98	CKA 120
Antenna Dimensions (w x h)		71cm x 65cm	84cm x 69cm	99cm x 96.5cm	144cm x 119
Operating Frequency	Tx	29.5 - 30.0 GHz	29.5 - 30.0 GHz	29.5 - 30.0 GHz	29.5 - 30.0 GHz
	Rx	19.7 - 20.2 GHz	19.7 - 20.2 GHz	19.7 - 20.2 GHz	19.7 - 20.2 GHz
Polarisation		Circular or Linear	Circular or Linear	Circular or Linear	Circular or Linear
Gain @ 29.75 GHz	Tx	44.4 dBi	45.4 dBi	47.3 dBi	49.5 dBi
Gain @ 19.95 GHz	Rx	40.4 dBi	42.0 dBi	44 dBi	46.3 dBi
Sidelobe Envelope (Tx, Co-Pol dBi)	1.6° < θ < 7°	29 - 25 Log θ	29 - 25 Log θ	29 - 25 Log θ	29 - 25 Log θ
	7° < θ < 9.2°	+8 dB	+8 dB	+8 dB	+8 dB
	9.2° < θ < 48°	32 - 35 Log θ	32 - 35 Log θ	32 - 35 Log θ	32 - 35 Log θ
	48° < θ < 180°	- 10 dB (Typical)	- 10 dB (Typical)	- 10 dB (Typical)	-10 dB (Typical)
Cross Polarisation Isolation	29.5 - 30.0 GHz	> 35 dB on axis	> 35 dB on axis	> 35 dB on axis	> 35 dB on axis
	19.7 - 20.2 GHz	> 35 dB on axis	> 35 dB on axis	> 35 dB on axis	> 35 dB on axis
Antenna Noise Temp.	@ 30°EI	< 44 K typ	< 44 K typ	< 44 K typ	< 44 K typ
VSWR (at feed flange)		< 1.3:1	< 1.3:1	< 1.3:1	< 1.3:1
- 3dB Beamwidth	14.25 GHz	0.90 deg	0.80 deg	0.68 deg	0.48 deg
	11.95 GHz	1.34 deg	1.2 deg	1.02 deg	0.76 deg

Mechanical Performance

Reflector Material		Steel	Steel	Steel	Steel
Feed Interface		Circular Waveguide	Circular Waveguide	Circular Waveguide	Circular Waveguide
Antenna Optics		Dual offset Fed	Offset Fed Prime Focus	Single or Dual Offset Fed	Single or Dual Offset Fed
Elevation Adjustment Range		5° - 90° Continuous	5° - 90° Continuous	5° - 90° Continuous	5° - 90° Continuous
		Fine adjustment +/- 0.1°	Fine adjustment +/- 0.1°	Fine adjustment +/- 0.1°	Fine adjustment +/- 0.1°
Azimuth Adjustment Range		360° Continuous	360° Continuous	360° Continuous	360° Continuous
		± 10° fine adjustment to +/- 0.1°	± 10° fine adjustment to +/- 0.1°	± 10° fine adjustment to +/- 0.1°	± 10° fine adjustment to +/- 0.1°
Skew Adjustment Range		± 90° Continuous	± 90° Continuous	± 90° Continuous	± 90° Continuous
Polarisation Adjustment Range		0 - 90° Continuous (Linear Pol)	0 - 90° Continuous (Linear Pol)	0 - 90° Continuous (Linear Pol)	0 - 90° Continuous (Linear Pol)
		+ / - 45° fixed (Circular Pol)	+ / - 45° fixed (Circular Pol)	+ / - 45° fixed (Circular Pol)	+ / - 45° fixed (Circular Pol)
Mast Pipe Interface		2" Cannister	2 3/8" Cannister	2 3/8" Cannister	3" Cannister

Environmental

Windload Operational		80 Km / h	80 Km / h	80 Km / h	80 Km / h
Operational - Survival		130 Km / h	130 Km / h	130 Km / h	130 Km / h
Survival		200 Km / h	200 Km / h	200 Km / h	200 Km / h



Raven Manufacturing Ltd
 Metcalf Drive
 Altham Industrial Estate
 Accrington
 Lancs. BB5 5TU
 UK

T + 44 (0) 1282 770000
 F + 44 (0) 1282 770022
 E sales@raven.co.uk
 W www.raven.co.uk