

# Diameter 4.6 M Dual Reflector Antenna

**Model No.** HGA - 4.6



**Options**

- Operational Band
  - C, Ku, Ka, or DBS Band Antenna System
- Extended Ku Antenna System
- Multiband Antenna System
- Deicing Systems (Heating)
- LNA , HPA , U/C or D/C System Integration
- Tracking Antenna System
  - (Step, Monopulse, Memory, TT/C or Manual track)
- Turnkey Installation and Testing
- Packing for Sea and Air Transport
- Full Motion or Limit Motion
- Extended Azimuth Travel Range

## Electrical Specifications

Model	HG46KUL2		HG46CC(L)2		HG46C/KUL4		HG46CC(L)2
Electrical	Ku-Band Linear Pol.		C-Band Circular (Linear) Pol.		C/Ku-Band Linear Pol.		C-Band Circular (Linear) Pol.
Item	Rx : 1Port	Tx :1Port	Rx : 1Port	Tx :1Port	Rx : 2Ports	Tx : 2Ports	Rx : Port
Frequency(GHz)	10.95 ~ 12.75	14.00 ~ 14.50	3.625 ~ 4.200	5.850 ~ 6.425	3.625 ~ 4.200	10.95 ~ 12.75	3.625 ~ 4.200
Gain (Mid;dBi)	53.2	54.85	43.8 (43.7)	47.44 (47.34)	43.9	53.16	43.8 (43.7)
Typical G/T (20° EL)	32.0 dB/K (11.85 GHz, 70K)		25.0 (24.9) dB/K (4 GHz, 30 K)		25.0 dB/K (4GHz, 30 K)	32.1 dB/K (11.85 GHz, 70 K )	25.04 (24.95) dB/K (4 GHz, 30 K)
Beam Width (3 dB)	0.36°	0.30°	1.07°	0.7°	1.07°	0.37°	1.07°(1.07°)
VSWR	1.3		1.3		1.38		1.38
Antenna Noise Temperature							
5°(EL)	81 K	•	58 K	•	57 K	81 K	58 (56) K
10°(EL)	69 K	•	51 K	•	49 K	69 K	51 (50) K
20°(EL)	58 K	•	47 K	•	44 K	58 K	47 (46) K
40°(EL)	54 K	•	43 K	•	41 K	54 K	44 (43) K
Axial Ratio	N/A		2.3 dB (N/A)		N/A		1.18 dB (N/A)
Cross Polarization Isolation	35 dB		17.7 dB (35)	30.8 dB (35)	35 dB		21.6 dB ( 35)
Port to Port Isolation							
Rx to Rx	•	•	•	•	35 dB	35 dB	•
Tx to Tx	•	•	•	•	•	•	•
Tx to Rx	-85dB	•	-70dB	•	•	•	•
Rx to Tx	•	-70dB	•	-70dB	•	•	•
Side lobe Performance	ITU-R S.580		ITU-R S.580		ITU-R S.580		ITU-R S.580
Max Power	5KW CW		5KW CW		N/A		N/A
RF Specification	H107720-01/015		H110025-02/03		H20091/05		H20081/015/04

※ All feed flange values G/T 20° elevation dry clear weather 18° C temperature no RF interference structure building wood land mountain front area

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## Mechanical Specifications

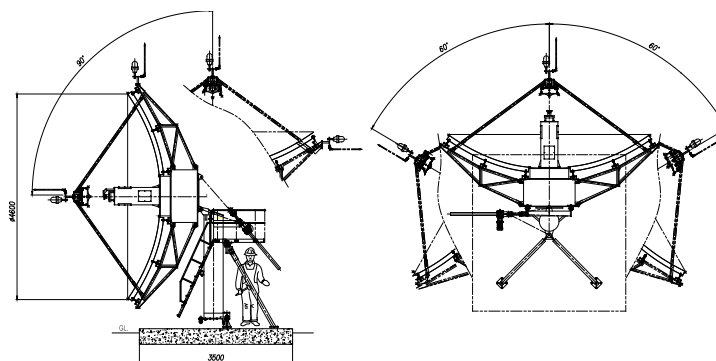
Antenna Diameter	4.6 M Dual Shaped Surface Reflector Type
Antenna Type	Kingpost Pedestal (Option Other Yoke & Tower)
Reflector	Shaping formed aluminum panels, galvanized steel back-up structure
Pedestal Configuration	Elevation over azimuth pedestal, constructed of galvanized steel
Azimuth Travel	$\pm 60^\circ$ or $180^\circ$ (3 segments @ $60^\circ$ ) Option Full Motion $\pm 270^\circ$ (Yoke & Tower Type)
Elevation Travel	5 to $90^\circ$ continuous
Azimuth Travel Rate	$0.06^\circ/\text{sec}$ (C-Band), $0.02^\circ/\text{sec}$ (Ku-Band)Jack Screw
Elevation Travel Rate	$0.06^\circ/\text{sec}$ (C-Band), $0.02^\circ/\text{sec}$ (Ku-Band)Jack Screw
Foundation (L x W x D)	3.5 x 3.5 x 0.4 m
Shipping Containers	one 20 ft standard
Soil Bearing Pressure	10,000 kg/m <sup>2</sup>

## Environmental Specifications

Survival Wind Loading	200 km/h
Operational Wind Loading	72 km/h, gusting to 97 km/h
Operational Temperature	$-20^\circ$ to $+50^\circ\text{C}$
Survival Temperature	$-30^\circ$ to $+60^\circ\text{C}$
Rain	up to 100 mm/h
Relative Humidity	0 ~ 100 %
Solar Radiation	1000 kcal/h/m <sup>2</sup>
Ice (Survival)	2.5 cm on all surfaces or 1.3 cm on all surfaces with 130 km/h wind gusts
Shock and Vibration	As encountered during shipment by airplane, ship or truck
Atmospheric Conditions	As encountered in coastal regions and/or heavily industrialized areas

※ Without active elements and components.

## Antenna Drawing (unit : mm)



Side View

Front View