

# SWE-DISH DA150K Mil Drive-Away



## High performance in rugged environments.

The Rockwell Collins SWE-DISH DA150K Mil Drive-Away is a combat proven, vehicle mounted, encapsulated antenna system, suitable for rough and quick to air situations. It is designed for military and government applications, and can serve as a highly mobile command post, a hub for theatre broadcast or be mounted on an incident response vehicle. The antenna deploys automatically, and is set up for transmission from inside the vehicle. The DA150K Mil Drive-Away is capable of both high and low power Ku-band transmission of data, voice and video. Auto pointing, and automatic satellite acquisition using a GPS and an electronic compass provide for easy operation.

### Straightforward integration

The roof pod equipment integration capability is unsurpassed - anything from a 16 W transceiver to a high power configuration with phase combined

400 W TWTA's plus an integrated Aircon, beaming up to 72 dBW EIRP.

Integration is easy with only one set of cables needed from the outside pod to the inside electronic rack. Noise and heat inside the vehicle are reduced by housing power amplifiers and RF equipment inside the pod. A low profile when stowed makes the antenna less conspicuous and reduces drag during transport.

### High performance antenna

The high performing elliptical 1.5 m (59 in) Gregorian offset antenna is the heart of the DA150K Mil Drive-Away. The dual optics and accurate carbon composite reflector surface give exceptionally low side lobes and good cross-polar performance. The antenna mount is on a large diameter turntable, making it backlash free in both elevation and azimuth.

### Ease of use

Auto pointing makes the DA150K Mil Drive-Away easy to operate and quick to air in the field. Inbuilt GPS, electronic compass

and inclinometer, together with the Easy Control & Monitoring (ECM025) unit, allow the antenna to automatically acquire a selected satellite. If the same satellite and polarization are used, operation is reduced to pressing two buttons - Deploy and Stow - the rest is automatic. The operator needs a minimum of training to operate the system.

### Rugged solution

The combat proven DA150K Mil Drive-Away is designed, manufactured and tested for compliance with military specifications. The pod encapsulates the antenna, antenna mechanism including feed arm and RF components, to reduce wear and tear from brushes or dust during transportation. At the same time all parts are easily accessible for repair. Extra care has been taken to make all mechanics resistant to sand, dust, and grit. The DA150K Mil Drive-Away has successfully performed in combat operations.

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## KEY FEATURES

- Combat proven
- Rapid deployment in and out of action
- Easy and cost effective integration
- High EIRP and G/T thanks to antenna design
- Encapsulated and rugged design
- FCC, Intelsat/Eutelsat, ETSI/CTR 030 approved, CE-marked with military EMC requirements

## SPECIFICATIONS

### General

Azimuth range	±183°
Azimuth drive	Worm-gear driven turntable Resolution: 0.05° Fast mode: 2.0°/s Slow mode: 0.2°/s
Elevation range	12° to 80° elevation (for azimuth ±90°), 13° to 60° (for azimuth ±90-183°)
Elevation drive	Harmonic driven gear Resolution: 0.05° Fast mode: 2.0°/s Slow mode: 0.2°/s
Deployment and stow	Automatic, by command from Antenna Control Unit SWE-ACU3000
Antenna sensors	True elevation inclinometer in elevation, multi-turn sensor in azimuth. Antenna position displayed on ACU.
Ambient temperature	Operational -20°C to +55°C (-4°F to +131°F) Storage -30°C to +70°C (-22°F to +158°F)
Solar radiation	Operational up to 1,200 W/m <sup>2</sup>
Wind speed	Operational up to 20 m/s (44 mph) Survival stowed 200 km/h (124 mph)
Operational humidity	Up to 100% condensing
Rainfall	Maximum 125 mm/h (5 in/h), excluding link budget effects
Sealing	All part/units are sealed to IP65
Altitude	Operational up to 3,000 m (9,850 ft) Survival up to 10,000 m (32,800 ft)
Finish, paint system	Pod in glass-fiber reinforced polyester. All visual parts on pod may optionally be painted NATO green. Paint system is compliant with STANAG 2338.
Interface to vehicle	Roof bars under the antenna can be permanently or temporarily attached to standard vehicle roof rails or directly to vehicle roof
Weight	190 kg (420 lbs) for heavy-duty version with de-icing, power amplifier and other customer equipment. Lower weight versions are optional.
Dimensions	231.2 x 153.5 x 45.1 cm (91.0 x 60.4 x 17.8 in)

### Antenna concept

Gregorian type dual optics antenna  
Elliptical main reflector in carbon fiber  
with size 1.5 x 1.35 m (59.1 x 53.1 in),  
folding feed arm and subreflector.  
Eutelsat/Intelsat compliant, station  
approval. FCC.

### Approvals

### Ku-band antenna performance

Antenna model	SWE-DISH 150K EDD
Sidelobe performance	29-25 log Ø dBi
Polarization	Linear <1° accuracy
Polarization performance	XPD >35 dB within 1dB cone
Transmit frequency	13.75 to 14.50 GHz
Transmit gain at mid-band	45.0 dBi
Receive frequency	10.70 to 12.75 GHz
Receive gain at mid-band	43.2 dBi
G/T	23 dB/K at 20° elevation and 20°C (68°F), clear sky
EIRP capability	63 dBW with 100W SSPA

### Antenna options

Antenna and pod-floor de-icing

### SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.



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