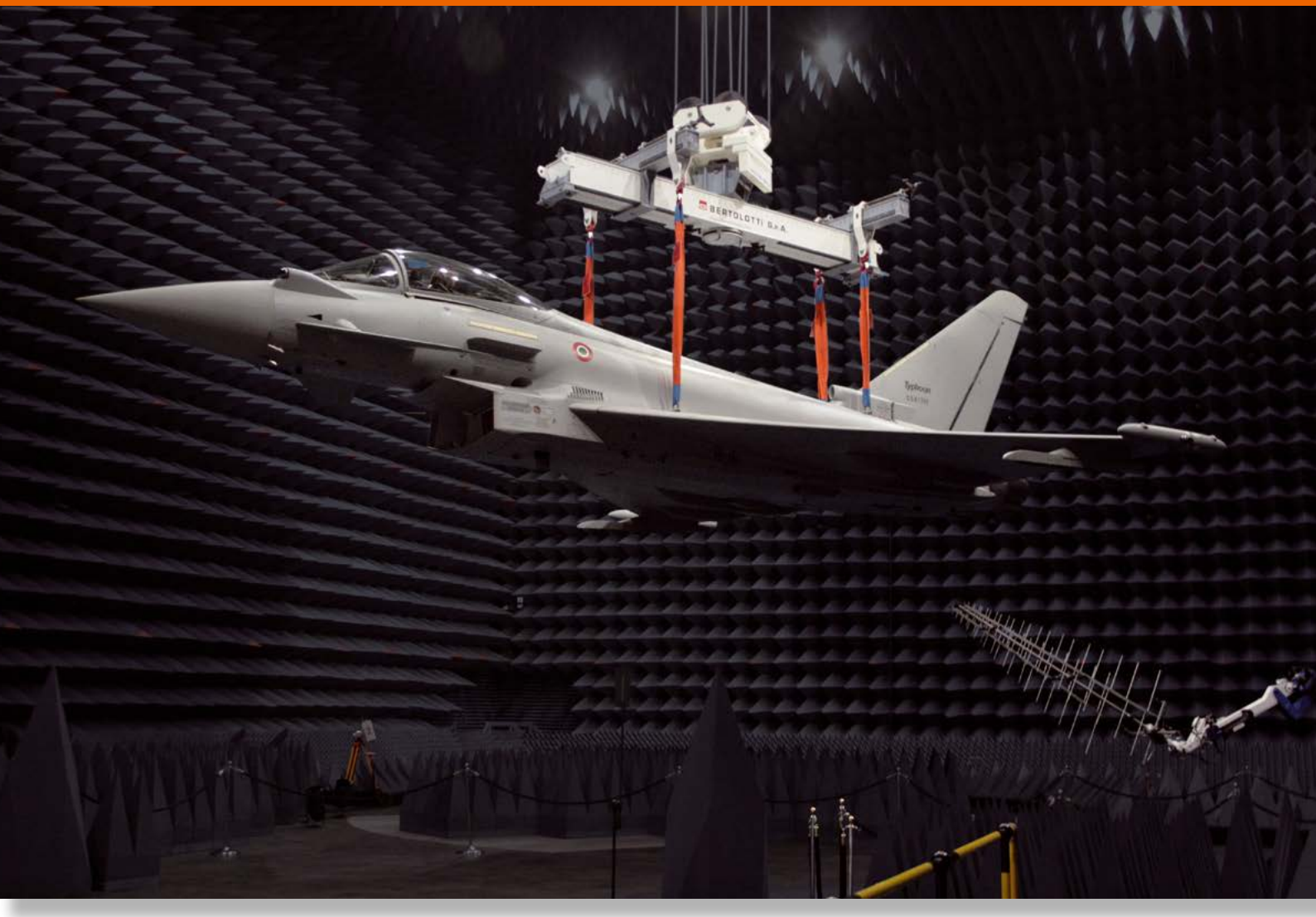
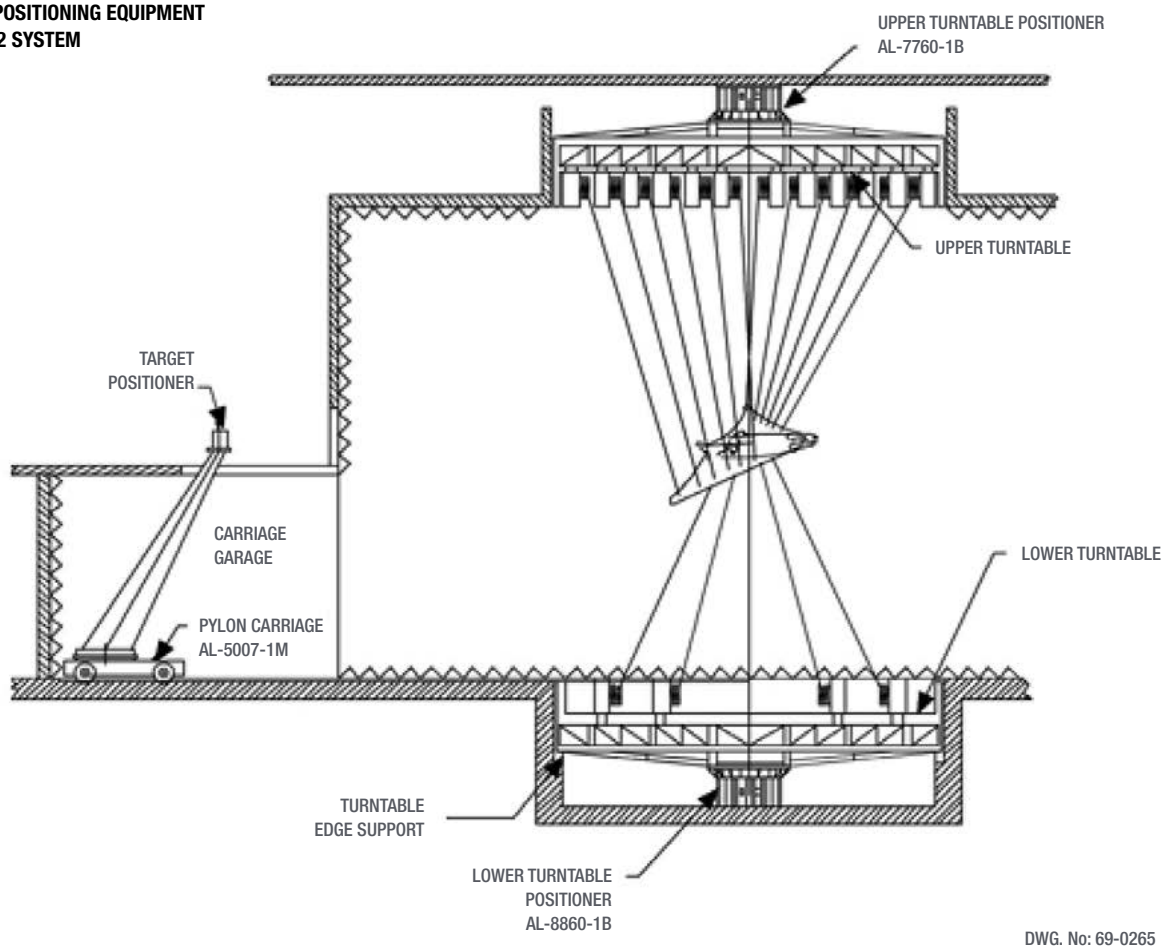
Target Manipulation Systems

String Reel



String Reel Target Manipulation Systems are used to support targets for low frequency Radar Cross Section (RCS) measurements. Three sizes of string reel positioners are used to handle various loads from scaled models to full size targets. Another use is for manipulation of a calibration target in anechoic chambers. A typical application requires 3 - 16 string reel positioners for the various loads.

ORBIT POSITIONING EQUIPMENT
AL-3062 SYSTEM



			AL-760-1B	AL-1260-1B	AL-1760-1B
Load	Continuous	lbs	500	1,500	3,000
	Peak	lbs	500	1,500	3,000
Nominal Speed		ft/min	0 - 10	0 - 6.5	0 - 8
Synchro Accuracy[1]		in	0.05	0.05	0.05
Nominal String Diameter		in	0.01	0.2	0.35
Drive Power DC SERVO		hp	1/3	3/4	3/4
Weight		kg	65	140	260
		lbs	140	300	580
String Type			Nylon or Kevlar		
Limit-to-Limit Travel		m	Adjustable 0 - 50		
		ft	Adjustable 0 - 150		
Mounting Details			Same as AL-760-1P Polarization Positioner	Same as AL-1260-1P Polarization Positioner	Same as AL-1760-1P Polarization Positioner
Slip-Ring Options			SR102, SR202, SR302		
Rotary Joint Options			RJ12, RJ18, RJ40 Fiber Optics		

1. Per 10ft of movement

Safety

The Spool is grooved to ensure proper winding of the string. The string is also protected by a close fit cover and string guide to ensure proper winding and unwinding of the string at “No Load” condition.

Properties Of The String Reel Mechanism

- Absolute Readout
- The string is wound on one layer only for the total 150 ft of travel. A dual-speed synchro is the readout system, thus the typical resolution is 0.005 inches.
- Compatibility: The system is operated with standard power and control equipment as in all ORBIT/FR antenna measurement instruments.
- Low friction: All parts in contact with the string are Teflon-coated to reduce wear to a minimum.
- The unit is based on ORBIT/FR polarization positioner with addition of spool mechanism. Thus, most features of the polarization positioner can also be implemented in the string reel unit.
- Totally enclosed design of the drive gear train and data take-off.
- Precision heavy-duty bearings.
- Variety of options: Rotary Joints, Slip-Rings, etc.
- All models are equipped with a tachometer for speed regulation and control.

All models are equipped with synchros operable at both 50 Hz and 60 Hz.

Contact your local sales representative for more information
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