

Configuration Options

Feedback		Limit Switches		Rotary Joint w/ RF path		Slipring Assembly		RF Switch Wiring		Concentricity	
-FDS		-LS		-RJ0		-SR0		-SW0		-CE	
-FDS	Dual Speed Synchro (36:1) All axes	-LS0	No Adjustable Limit Switches	-RJ0	No Rotary Joint	-SR0	No Slipring	-SW0	No RF Switch Wiring	-CE	Eccentric
-FI	Inductosyn All axes	-LS	Adjustable Limit Switches, AZ only	-RJ26.5	DC-26.5 GHz, AZ only	-SR60	60 Conductor	-SW	RF Switch Wiring	-CC	Concentric
				-RJ18	DC-18 GHz, AZ only	-SR84	84 Conductor				
				-RJ40	DC-40 GHz, AZ only						

Option Compatibility Table

Model	Feedback	Limit Switches	Rotary Joint w/ RF path	Slipring Assembly	RF Switch Wiring	Concentricity
MI-55051D	FDS only	Yes	Yes - Note 1	No	Note 2	No
MI-55150D	FDS only	Yes	Yes - Note 1	SR60 only - Note 1	Note 2	Yes
MI-55240D	Yes	Yes	Yes - Note 1	SR60 only - Note 1	Yes - Note 1	Yes
MI-55260D	Yes	Yes	Yes - Note 1	Yes - Note 1	Yes - Note 1	Yes
MI-55290D	Yes	Yes	Yes - Note 1	Yes - Note 1	Yes - Note 1	Yes
MI-55450D	Yes	Yes	Yes - Note 1	Yes - Note 1	Yes - Note 1	Yes
MI-55850D	FDS Only	Yes	Yes - Note 1	Yes - Note 1	Yes - Note 1	No

Note 1 - Rotary Joint with RF Path requires slipring assembly

Note 2 - Available on special request. Consult factory.



MI-55000 Family of Azimuth-over-Elevation-over-Azimuth Positioners



- Versatile configuration allows precise pointing of the upper AZ/EL positioner
- Rugged construction assures superior reliability and longevity
- Full 360° motion in lower AZ, wide coverage in upper AZ description

Description

The MI-55000 Family of Azimuth-over-Elevation-over-Azimuth Positioners is our most versatile family of positioners. The lower azimuth axis on these positioners allows precise pointing of the upper azimuth-over-elevation axes. Both eccentric and concentric configurations are available for most models. Note that an installed RF path through each positioner can be ordered as an option.

Applications

Using this configuration allows a range designer to configure multiple-source ranges. With this range design, the test positioner is located at the intersection point of the different source antenna's radiating path.

Specifications

Parameter	Units	55051D	55150D	55240D	55260D	55290D	55450D	55850D
Bending Moment	ft-lbs	800	2,500	10,000	10,000	30,000	108,000	300,000
	Nm	1,085	3,390	13,558	13,558	40,675	146,430	406,746
Vertical Load	lbs	800	2,500	10,000	10,000	30,000	45,000	50,000
	kg	363	1,134	4,536	4,536	13,608	20,412	22,680
Drive Motor								
Lower Azimuth	hp	1/3	3/4	3/4	3/4	3/4	5	5
	kW	0.25	0.56	0.56	0.56	0.56	3.73	3.73
Elevation	hp	1/3	1/2	3/4	3/4	3/4	5	5
	kW	0.25	0.37	0.56	0.56	0.56	3.73	3.73
Upper Azimuth	hp	1/15	1/3	3/4	3/4	3/4	5	5
	kW	0.05	0.25	0.56	0.56	0.56	3.73	3.73

Specifications (cont.)

Delivered Torque								
Lower Azimuth	ft-lbs	500	1,000	2,750	6,000	6,000	18,000	80,000
	Nm	678	1,356	3,729	8,135	8,135	24,405	108,466
Elevation	ft-lbs	800	2,500	10,000	10,000	20,000	90,000	150,000
	Nm	1,085	3,390	13,558	13,558	27,116	122,024	203,373
Upper Azimuth	ft-lbs	100	500	1,000	1,000	2,750	18,000	40,000
	Nm	136	678	1,356	1,356	3,729	24,405	54,233
Withstand Torque								
Lower Azimuth	ft-lbs	800	800	2,500	2,500	10,000	18,000	75,000
	Nm	1,085	1,085	3,390	3,390	13,558	40,675	101,687
Elevation	ft-lbs	800	2,500	10,000	10,000	30,000	108,000	300,000
	Nm	1,085	3,390	13,558	13,558	40,675	146,429	406,746
Upper Azimuth	ft-lbs	200	600	1,850	1,850	3,800	18,000	55,000
	Nm	271	813	2,508	2,508	5,152	24,405	74,570
Max. Full Load Speed								
Lower Azimuth	rpm	1.2	1.3	0.5	0.2	0.2	0.5	0.09
Elevation	deg/min	200	140	32	32	20	20	10
Upper Azimuth	rpm	1.3	1.2	1.2	1.2	0.5	0.5	0.2
Position Accuracy								
Lower Azimuth	deg	0.03	0.03	0.03	0.02	0.02	0.02	0.02
- with Inductosyn® encoder	deg	N/A	N/A	±0.005	±0.005	±0.005	±0.005	N/A
Elevation	deg	0.05	0.05	0.05	0.05	0.05	0.05	0.03
- with Inductosyn® encoder	deg	N/A	N/A	±0.005	±0.005	±0.005	±0.005	N/A
Upper Azimuth	deg	0.05	0.03	0.03	0.03	0.03	0.02	0.02
- with Inductosyn® encoder	deg	N/A	N/A	±0.005	±0.005	±0.005	±0.005	N/A
Total Max. Drive Gear Backlash								
Lower Azimuth	deg	0.15	0.1	0.08	0.08	0.08	0.05	0.02
Elevation	deg	0.08	0.05	0.05	0.03	0.03	0.03	0.02
Upper Azimuth	deg	0.2	0.15	0.1	0.1	0.1	0.05	0.02
Total Elevation Limit-to-Limit Travel	deg	+95;-45	+95;-45	+92;-45	+92;-45	+92;-45	+92;-45	+92;-20
Convertible to Concentric Configuration	in	No	Yes	Yes	Yes	Yes	Yes	Yes
Turntable Diameter	in	16	28	43	43	44	47.3	83
	mm	406	711	1,092	1,092	1,118	1,201	2,108
Base Outside Diameter	in	24	28.75	36	56	56	56	92
	mm	610	730	914	1,422	1,422	1,422	2,337
Center Access Hole Diameter	in	3.75	3	3	3	3	6	8
	mm	95	76	76	76	76	152	203
Total Height	in	44.38	45.38	55.19	84.69	91.63	114.25	165.75
	mm	1,127	1,153	1,402	2,151	2,327	2,902	4,210
Net Weight	lbs	670	940	2,285	5,800	6,400	11,600	50,000
	kg	304	426	1,036	2,631	2,903	5,262	22,680