

MI-51000 Family of Azimuth Positioners



- Proven design with established reliability
- Broad load coverage up to 400,000 lbs.
- Rugged construction assures superior longevity

Description

The MI-51000 Family of Azimuth Positioners fall into two principle categories: medium-duty and heavy-duty. The MI-51050 and MI-51051 support medium loads up to 2000 lbs while the MI-51150 through MI-51850 models provide precision mounting for test fixtures and antennas supporting loads up to 400,000 lbs.

Cables and positioner control units are ordered separately. Note that an installed rotary joint and RF path through each positioner is ordered as an option.

Specifications

Parameter	Units	51050D	51051D	51150D	51152D	51230D	51300D	51430D	51450D	51850D
Total Bending Moment	ft-lbs	1,000	1,000	10,000	10,000	22,500	35,000	165,000	165,000	750,000
	Nm	1,356	1,356	13,558	13,558	30,506	47,454	223,710	223,710	1,016,865
Total Vertical Load	lbs	2,000	2,000	10,000	10,000	20,000	30,000	50,000	50,000	400,000
	kgs	907	907	4,536	4,536	9,072	13,608	22,680	22,680	181,437
Drive Motor	hp	1/15	1/15	1/3	1/3	3/4	3/4	3/4	5	5
	kW	0.05	0.05	0.25	0.25	0.56	0.56	0.56	3.73	3.73
Delivered Torque	ft-lbs	100	40	200	500	1,000	2,750	6,000	18,000	80,000
	Nm	136	54	271	678	1,356	3,729	8,135	24,405	108,466
Withstand Torque	ft-lbs	200	200	600	600	1,850	4,200	14,000	25,000	100,000
	Nm	271	271	813	813	2,508	5,694	18,981	33,896	135,582
Maximum Full Load Operating Speed	rpm	1.2	3	3	1.3	1.2	0.5	0.2	0.5	0.09
Position Accuracy	deg	0.05	0.05	0.03	0.03	0.03	0.03	0.02	0.02	0.02
- with Inductosyn® encoder	deg	NA	NA	NA	NA	±0.005	±0.005	±0.005	±0.005	±0.005

Total Max. Drive Gear Backlash	deg	0.2	0.2	0.15	0.15	0.1	0.08	0.08	0.05	0.02
Total Limit-to-Limit Travel	deg	400	400	400	400	400	400	400	400	400
Turntable Diameter	in	16	16	20	20	25	30.5	47.3	47.3	84 x 84 (sq.)
	mm	406	406	508	508	635	775	1,201	1,201	2133 x 2133
Center Access Hole Diameter	in	3.75	3.75	3	3	3	3	6	6	13
	mm	95.3	95.3	76.2	76.2	76.2	76.2	152.4	152.4	330.2
Base Outside Diameter	in	13.25 x 17.25	13.25 x 17.25	24	24	28.75	36	56	56	92
	mm	336 x 438	336 x 438	610	610	730	914	1,422	1,422	2,337
Total Height	in	13.25	13.25	19.75	19.75	14.75	17	39	39	54
	mm	337	337	502	502	375	429	986	986	1,362
Net Weight	lbs	110	110	280	280	350	485	4,000	4,300	15,000
	kg	50	50	127	127	159	220	1,814	1,950	6,804
Shipping Weight	lbs	150	150	320	320	380	570	4,500	4,800	N/A
	kg	68	68	145	145	172	259	2,041	2,177	N/A

Configuration Options

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

Option Compatibility Table

Model	Feedback	Limit Switches	Rotary Joint w/ RF path	Slipring Assembly ¹	RF Switch wiring
51050D	FDS only	Yes	Yes	No	No
51051D	FDS only	Yes	Yes	No	No
51150D	FDS only	Yes	Yes	SR60 only	Yes ¹
51152D	FDS only	Yes	Yes	SR60 only	Yes ¹
51230D	Yes	Yes	Yes	Yes	Yes ¹
51300D	Yes	Yes	Yes	Yes	Yes ¹
51430D	Yes	Yes	Yes	Yes	Yes ¹
51450D	Yes	Yes	Yes	Yes	Yes ¹
51850D	Yes	Yes	Yes	Yes	Yes ¹

¹ Slipring Assembly not compatible with RF Switch Wiring Option.



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