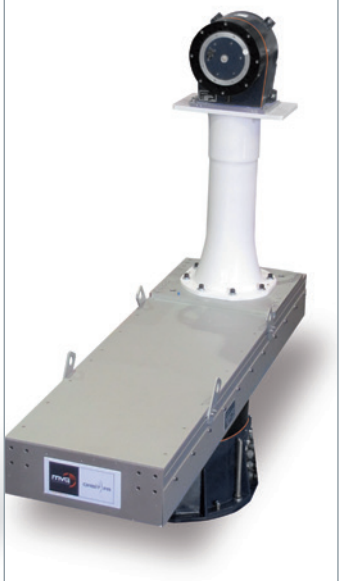
Model Towers - Light Duty

AL-38000 Series

Our AL-38000 model towers are suited for light duty applications with an operating load of up to 150 lbs (68 kg). This series is available with a choice of either a manual or motorized linear offset slide. The manual slide can be hand-push or handwheel. The mast, which can be either vertical or inclined, is available in fiberglass or aluminum construction.

AL-38100

AL-38200



Applications

- General Purpose Positioning Subsystems
- Far-Field & Near-Field Antenna Measurements
- Indoor Use

Product Highlights

- Linear Bearings
- Scale (Offset Indication)
- Mechanical Stops
- Manual AUT Adjustment over Lower AZ Center of Rotation
- Compatible with Standard Antenna Positioners (Support Wiring Required)

Specifications - AL-38000 Series Model Towers Light Duty

PARAMETER		UNITS	MODEL	
			Manual	Motorized
				
			AL-38100	AL-38200
MODEL TOWER ASSEMBLY				
Operating Load (maximum)		lbs	150	
		kg	68	
Total Model Tower Height (F) (maximum)[1]		ft	10	
		m	3	
Fore-Aft Bending Moment (maximum)		ft-lbs	300	
		m-kg	42	
Maximum Swing Radius (H)		in	40	
		mm	1,000	
Weight (Approx.)		lbs	154	209
		kg	70	95
1. Roll Positioner				
Option 1: Discrete Positioner	Maximum Roll Positioner		AL-360-1P	
	Maximum Roll/EL Positioner		AL-4369-1	
Option 2: Integrated Gearhead	Gearhead Model		GH1	
	Operating Load	lbs	150	
		kg	68	
	Delivered Torque	ft-lbs	90	
		m-kg	12	
	Withstand Torque	ft-lbs	120	
		m-kg	17	
	Gearhead Turntable Bending Moment (maximum)	ft-lbs	300	
		m-kg	42	
	Motor Drive Power	hp	1/8	
	Nominal Speed	rpm	1	
	Roll Standard Angle Transducer Format		Dual Speed Synchro	
	Roll Standard Accuracy	deg	± 0.15	
	Roll Maximum Backlash	deg	0.15	
	Gearhead Flange Diameter	in	4	
		mm	100	
	Thru-Hole Diameter	in	1.3	
		mm	33	

PARAMETER		UNITS	MODEL	
			Manual	Motorized
				
			AL-38100	AL-38200
2. Mast				
Mast Style			Vertical or Inclined	
Mast Construction			Fiberglass or Aluminum	
3. Linear Offset Slide				
Manual and Motorized	Limit-to-Limit Travel[8] (A) (maximum)	in	24	
		mm	610	
	Slide Bending Moment (maximum)	ft-lbs	90	
		m-kg	68	
	Slide Construction		Aluminum	
Motorized Only	Slide Standard Angle Transducer Format		Dual Speed Synchro	
	Slide Standard Accuracy	in	± 0.005	
		mm	± 0.13	
	Slide Maximum Backlash	ft-lbs	0.002	
		m-kg	0.05	
4. Lower Positioner				
Lower Positioner[2]			Refer to AZ, AZ/EL, EL/AZ or AZ/EL/AZ catalog section	

ENVIRONMENTAL

Operating Temperature		- 4° F to 140° F (- 20° C to 60° C)

OPTIONS

EN001	Incremental Encoder (Standard Accuracy)		Opt
	Accuracy	deg	± 0.1
EN004	Absolute Encoder (Standard Accuracy)		Opt
	Accuracy	deg	± 0.1
EN005	Gearhead Incremental Encoder (High Accuracy)		Opt
	Accuracy	deg	± 0.07
RJ[4,5]	Rotary Joint		RJ12U RJ18U RJ40U RJ50U
MM	Mounting Thread		MM002
IC	Interlock Circuit		IC002
CW	Counterweight		CW001

(-) N/A S Standard Opt Optional

Supplied Accessories

Digital Documentation Set

User Manual (Installation, Setup, Operation & Maintenance)

Cables

- Cable Carrier
- Interconnect Cable for Connection to Lower Positioner

Optional Accessories

- Absorber Plates
- Alignment Fixture Between Roll Positioner & Mast
- Counterweights (may apply if elevation axis is defined)

Technical Notes

1. Model tower height is defined as the distance from the base of the linear offset slide to the center of the roll axis. The height of the model tower assembly will impact *pickup mode* in lower positioners containing an elevation axis. Define elevation measurement angles and verify lower positioner specifications when configuring this product
2. The lower positioner may require electrical wiring and/or an RF path to support the model tower. Options are available for the lower positioner, including EX002, SR, and RJ. Lower positioner is purchased separately
3. All accuracy data is based on no-load conditions. Contact MVG-ORBIT/FR for accuracy under load conditions
4. Roll axis is equipped with adjustable limit switches capable of approx 20° up to 900° total travel. When rotary joint options are specified, limit switches remain but are electrically disabled. Roll axis is factory-set at 400° (± 200°)
5. Rotary joint options may alter the original physical profile of the roll axis stage. Consult MVG-ORBIT/FR
6. Verify model tower's maximum swing radius (G - clearance to absorber) when specifying this product for use inside an anechoic chamber
7. Dimensions may vary depending on final configuration
8. Standard offset slide travel is 24 inches. Other lengths are available in one foot increments, up to 8 feet
9. An optional alignment fixture can be installed between the roll axis positioner and mast

ORDERING INFORMATION

- **Build your configuration using the ordering example below.**

AL-38100	-	HW	-	24	-	96	-	F	-	C	-	360
Model Tower Series 38100 - Manual 38200 - Motorized		HP - Hand-push HW - Handwheel M - Motorized		Linear Offset Slide Travel (in)		Total Roll-to-Base Height (in)		Mast Construction (Fiberglass or Aluminum)		Mast C - Inclined V - Vertical		Discrete Positioner Model*

* To order with integrated gearhead, leave the end of the part number blank and add GH1 as a separate line item.

Contact your local sales representative for more information
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www.mvg-world.com/positioners