maturo GmbH
Am Kalvarienberg 24 • 92536 Pfreimd • Germany

Antenna Positioning System APTL & EAP

Our innovative OTA/CTIA positioning systems were especially developed for the smooth and accurate positioning of devices and antennas during tests. Both can be positioned in linear axes (vertical and horizontal) and in rotation axes (elevation, azimuth, tilt and polarisation), depending on customer requirements.

- Consists of an APTL (Azimuth Polarization Tilt Linear Positioner) and an EAP (Electrical Antenna Positioner) mounted on linear rails
- Spherical Great-Circle Cut system
- High accurate antenna measurement capabilities for both, near-field and far-field data acquisition
- 5G NR FR1 / FR2 OTA testing capabilities
- Accuracy enough for a frequency coverage up to 90 GHz
- Ideal for Antenna-Under-Test (AUT) like satellite dishes or massive MIMO base station-antennas
- Independent rotations of all motion axis
- Variable speed adjustments at all axis
- Readout by high accurate encoders
- Integrated rotary joint for EUT and antennas available upon request
- Easy installation and implementation in existing chambers

Information presented enclosed is subject to change as product enhancements are made regularly. Pictures included are for illustration purposes only and do not represent all possible configurations.

Phone: +49 (0)9606 923913-0
Fax: +49 (0)9606 923913-29
eMail: info@maturo-gmbh.de
Web: www.maturo-gmbh.de

Technical data APTL:

Load capability Distance center of gravity of DUT to mounting flange	max. 50 kg max. 150 mm
Rotating angle azimuth (x-axis) electrically	+/- 90°
Speed azimuth adjustable	0.5°/s – 18°/s
Rotating angle polarization (y-axis) electrically	+/- 60°
Speed polarization adjustable	0.5°/s – 30°/s
Polarization axis height above floor	1.75 m
Tilting angle (z-axis) electrically	-45 ° (down) to + 60° (up)
Speed tilting adjustable	0.5°/s – 18°/s
Positioning accuracy in each axis	+/- 0.05°
Linear movement range manually (manually lockable)	500 mm
Positioning accuracy linear	+/- 1 mm (indicated by scale)
Mounted on linear rails for manual distance adjustment	approx. 600 mm
Accessories	Wooden plates for absorber mounting Absorbers for covering Mounting plate for antennas Power supply cable Service manual

Technical data EAP:

Load capability	max. 5 kg
Rotating angle polarization (y-axis) electrically	+/- 60°
Speed polarization adjustable	0.5°/s – 18°/s
Polarization axis height electrical adjustable	1.3 m – 2.2 m (1.75 m +/- 0.45 m)
Polarization positioning accuracy	+/- 0.05°
Linear movement range (y-axis) electrical	+/- 450 mm
Linear movement range (z-axis) electrical	+/- 450 mm
Speed linear adjustable	1 cm/s – 10 cm/s
Positioning accuracy linear	+/- 1 mm
Mounted on linear rails for electrical distance adjustment	approx. 5.5 m
Accessories	Wooden plates for absorber mounting Absorbers for covering Mounting plate for antennas Power supply cable Service manual

Technical data general:

Material	Metal structure
Overall dimensions (L x B x H)	approx. 8.4 m x 1.6 m x 2.6 m
Motors	Synchronous servo motors
Drives	High accurate gears
Voltage	380 VAC – 480 VAC, 50 Hz / 60 Hz three phases
Current consumption	max. 32 A
Required RCD	300 mA
Control cable	Fiber optic lines
Remote control via	LAN (TCP/IP); (IEEE only with NCD)
Interference suppression	20 dB under limits DIN EN 55011:2018-05 class B
Operating temperature	10° C – 35 ° C
Total weight	approx. 4300 kg
Accessories	Wooden plates for absorber mounting Absorbers for covering Mounting plate for antennas Power supply cable Service manual

Other specifications available upon on request