Periscope Testing

Two Axis Motion Simulator Model AC2295-VA

Modes of Operation

- Absolute Positioning: 0.00001 deg. resolution
- Rate – absolute and relative, excellent instantaneous rate stability
- Tracking Mode – for real time simulation of motion profiles
- Synthesized mode – Sinusoidal motion, command amplitude and frequency
- Local or remote control via touch sensitive operator panel or digital interface
- Analog readout and command with 16 bit resolution

Feature

The AC2295-VA is designed to accommodate periscopes and optical collimators. The Two Axis Table is configured with an outer horizontal (elevation) and an inner vertical table axis (azimuth) mounted perpendicular to the outer axis on the mechanical stand. The inner axis table top supports the heavy payload or Unit Under Test (UUT up to 400 kg). To keep the test article optical gimbal or sensor focal point at the axis intersection a large offset is necessary. The elevation axis is equipped with a 200Nm clamp brake to facilitate the installation of the optical collimation target. Adjustable soft and hard limits reduce the angular freedom from +/-145 deg to +/-135 deg, +/-120 deg or +/-105 deg. Both axes are driven by direct drive motors.

Power for the collimator as well as the feedback signals are handled though customer defined twisted cable. The inner axis table top has a threaded hole pattern for the mounting of the periscope seat. Electrical access to the periscope is handled through twisted cables terminating in connectors on the table top and on the base of the instrument.

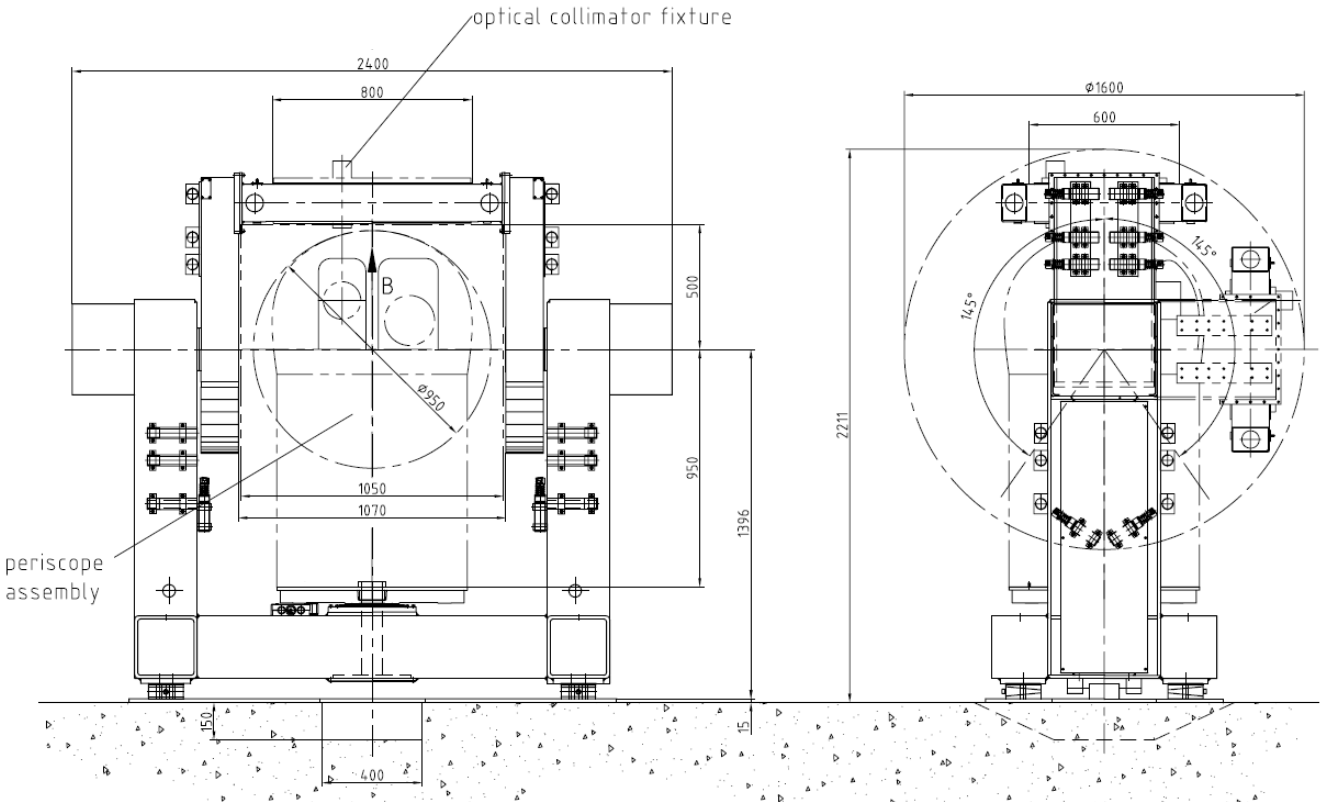
The ACUTROL®3000 controls the table. The digital controller has a touch sensitive operator interface and scalable analog input/output interface. Programmable Event Pulses can be used for calibration and synchronization with external computers or test equipment. Optionally, real time interfaces can be added to the standard digital interfaces; Ethernet (TCP/IP) and IEEE-488 (GPIB).

Options

- ACUTROL®3000 - Versions
- Real time interfaces: SCRAMNet, or VMIC
- RS232 Serial Interface
- Special UUT adapters/Interfaces
- Slipring assembly

Dimensions	Height, max		2’195 mm
	Height of outer axis		1’395 mm
	Width across outer axis		2'400 mm
	Base dimensions		1’950 mm x 950 mm
	Table top dimensions		760 mm dia.
	Table top offset		950 mm
	Elevation platform offset		500 mm
Unit Under Test (UUT)	Payload weight	Azimuth	nominal 200 kg, max. 400 kg
		Elevation	nominal 50 kg, max. 100 kg
	Clearance envelope	Azimuth	1’050 x 1’450 mm (diam x H)
		Elevation	800 x 600 mm (W x D)

	Azimuth, inner axis	**Elevation,** outer axis
Mech. specifications		
Orthogonality	+/-10”	
Wobble (peak)	10”	10”
Axis intersection	1 mm sphere	
Static and dynamic performances		
Angular freedom	+/-180 deg (limited)	+/-145 deg (limited but adjustable in 4 positions)
Positioning accuracy	5 arc sec p-p	5 arc sec p-p
Rate range	+/-200 deg/sec	+/-100 deg/sec
Acceleration, no load	500 deg/sec^2	50 deg/sec^2



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