

Centrifuge Series: HPC-4_7_600

Features

- High precision centrifuge with rotating satellite table
- Rate with no drift, good instantaneous rate stability and high resolution of $<0.0003\text{deg/s}$
- Optional with laser system for measuring elongation (res. $<50\text{nm}$) and bending (res. $<0.1\text{arcsec}$) of the boom
- Optional with monitored and automatic counter-weight calibration
- Time synchronization between main and satellite axis $<1\mu\text{s}$
- Positioning resolution of $<0.0001\text{deg}$



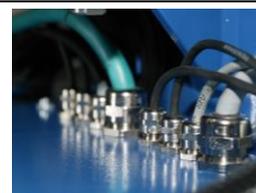
Description

The Series HPC-4 is designed for the testing and calibration of integrated packages and subassemblies. The offset counter rotating table enables to test rate and acceleration sensors simultaneously at different levels. Both axes can get electronically geared. Commands are hard synchronized with update rates of $0.5\mu\text{s}$. All operations can be commanded by a PC with the delivered, easy to use, software.

Payloads are mounted on table top. A pattern of threaded holes accept a variety of test loads. Electrical access to the payload is dimensioned for different power ratings and signals. The slip ring lines are terminated on the platen and the base casting.

The Series HPC-4 Test-Instrument consists of modular cube assemblies with precision bearings and the required servo components. The drive module houses the direct drive brushless torquer, the high resolution encoder, the slip ring capsule, the amplifier/controller assembly and power supply. All components are interchangeable facilitating repair and spare part supply management.

The centrifuge has an enclosure for the protection of the operator and to reduce the aero dynamic drag. A large clam shell door provides convenient access to the instrument and the payload. All operations can be commanded by a PC with the delivered, easy to use, software. Analog command with 12bit resolution is optional available.



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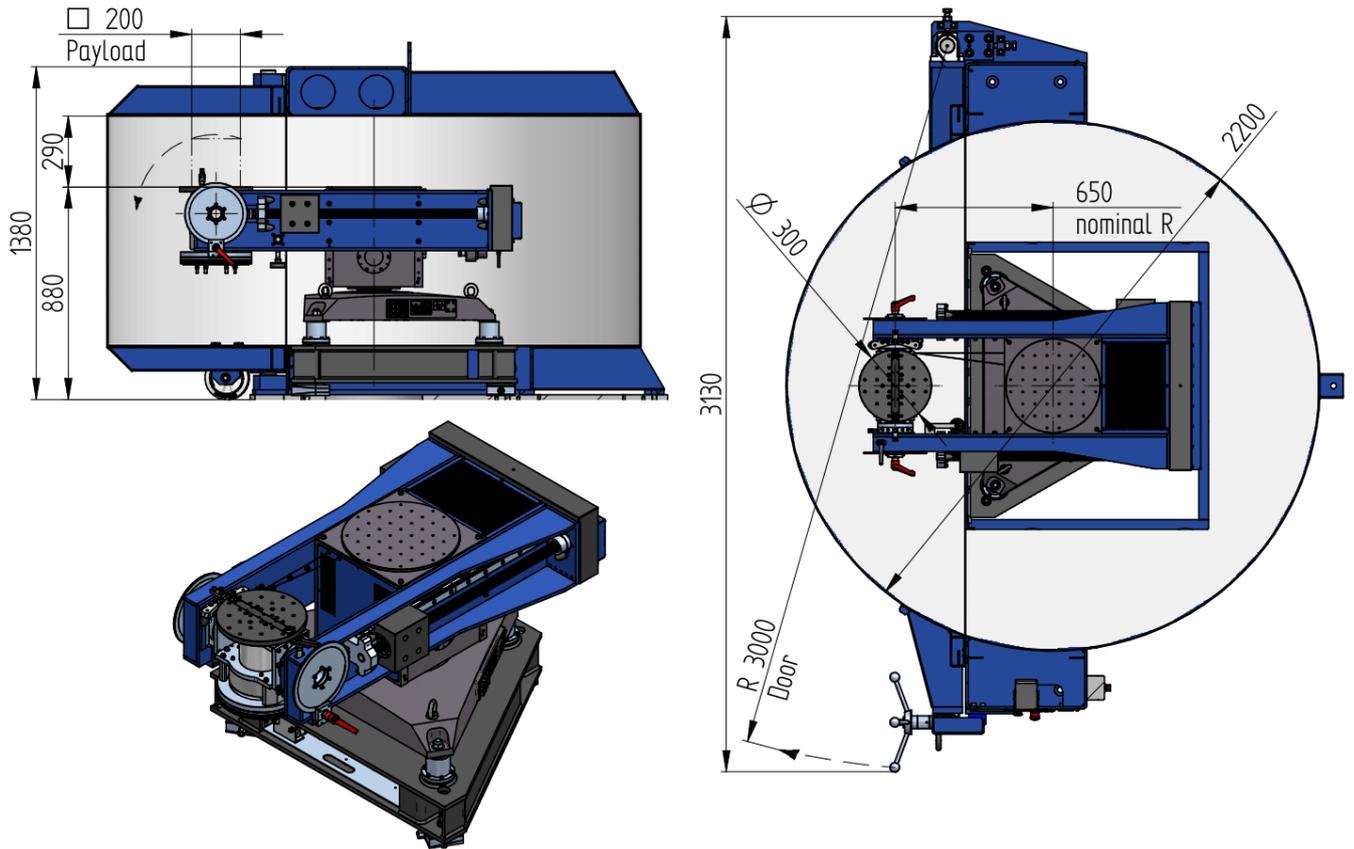
Specification Summary*

General	Payload, nominal	200mm cube, 20kg (35kg peak)
	Radius, nominal	650mm, to Ø300mm satellite table
	Weight	~2'250kg (without payload)
	Dimension, total	~Ø2'500x1'500mm (DxH)
Performance	Capacity	600Gkg
	G-Rating	fraction of micro G to >30G optional: up to 100G
Rate	Range	0.1 to 3'000deg/s (53.3rad/s)
	Resolution	<0.00028deg/s (<1arcsec/s)
	Stability	<±0.001% of commanded rate over one revolution
	Slew	profiling within acceleration and jerk limits
Position	Range	0 to 359.9999deg unlimited rotation
	Resolution	<0.0001deg (<0.4arcsec)
	Accuracy	<0.00083deg _{RSS} (<3arcsec)
	Repeatability	<0.00056deg (<2arcsec)
	Transducer	SIN/COS high-resolution, absolute
Acceleration	Slew	profiling within acceleration and rate limits
	Range	can be set within the dynamic range
	Resolution	<0.001deg/s ² (<4arcsec/s ²)
Axis	Alignment	satellite to main axis support perpendicular or orthogonal position within <±0.00056deg (<2arcsec) optional: free axis angle positions
	Wobble	<±0.00056deg (<2arcsec)
	Parallelism	satellite to main axis <0.0028deg (<10arcsec)
	Supply	1L+N+P, 230V ±10%, 50/60Hz, 16A, fused slow blow
	Command	Ethernet via compatible input device or host computer
Time sync.		Command or readout
Configuration	Mounting table top	hard anodized aluminum, flat ±0.1mm with grid of threaded mounting holes and inserts optional: customized table top and satellite table
	Lines to payload	slip ring lines from base to satellite table 4 lines, 5A, shielded 28 lines, 2A, shielded optional: customer defined lines and connections to payload, optional: event pulse every 1/revolution optional: laser system for measuring elongation (res. <50nm) and bending (res. <0.1arcsec) of the boom optional: monitored and automatic counterweight calibration



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Outline Dimension



*Design and specifications are subject to changes without prior notice

