

When large structures need to be tested, inertial shakers provide the ideal solution. The central spigot is attached to the structure under test and the body then provides the inertial mass. These shakers have found applications for testing buildings, floor loading resonances, ship's decks for helicopter loading, squeaks and rattle testing in cars, geological exploration, helicopter rotor simulation and active vibration cancellation.

Features

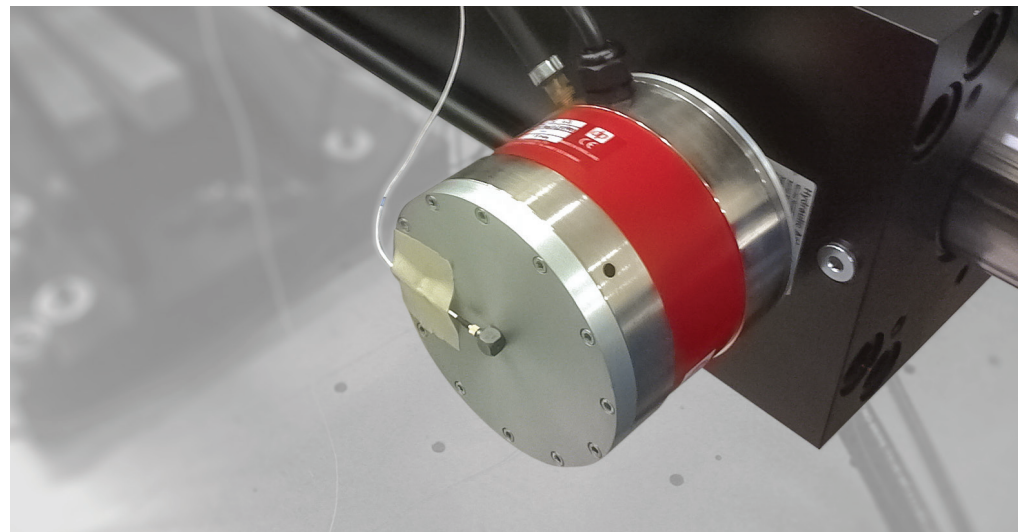
- Force outputs from 30 N to 250 N
- Tunable suspension to produce peak force at low resonant frequencies
- Cooling by air-line or by standard blowers

Typical Applications

- Structural (modal) testing of naval ship and submarine bulkheads
- Testing of industrial plant pipework
- Testing of heavy machine bedplates
- Testing of building walls and floors
- Active vibration cancellation (with a customer supplied control system)

Inertial shakers are permanent magnet devices which may be sealed for short test operations in harsh environments. For prolonged use it is necessary to cool the shakers and this can be achieved either by the attachment of a standard shop dry air line or by the attachment of a small cooling blower to suck the air through the shaker.

All power amplifiers used with inertial shakers may be fitted with an internal sine signal source to provide simple excitation for the shaker. Externally generated signals may also be applied to the power amplifier.

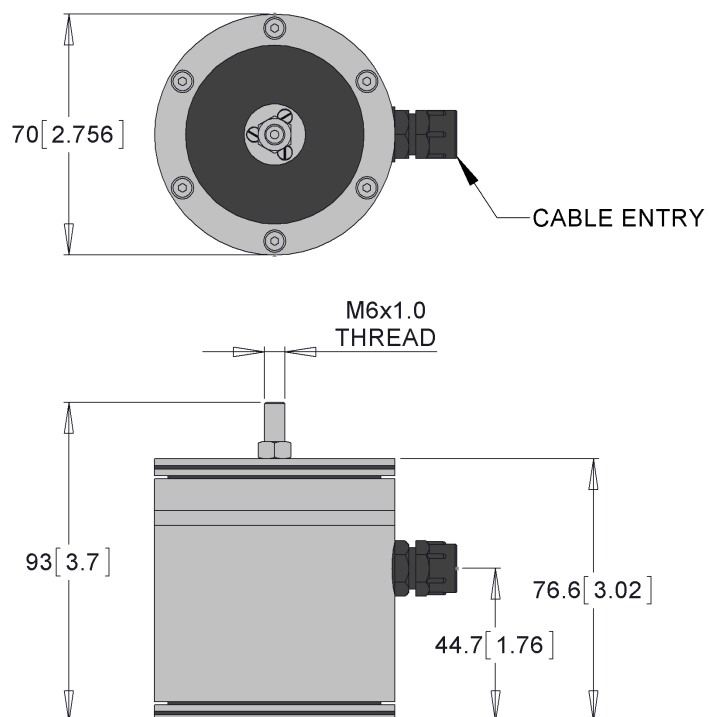


	Maximum Sine Force (pk)			Inertial Mass		Spigot Threads	Spring Mass Resonance	Electrical Power Consumed
	lbf	N	kgf	lbs	kg	Metric	Hz	kVA
GW-IV40/PA30E	7	30	3.1	2.7	1.21	M6	30	0.1
GW-IV45/PA30E	11	50	5.1	9.3	4.2	M8	21	0.1
GW-IV46/PA100E	38	170	17.3	32	14.5	M12	22	0.2
GW-IV47/PA300E	56	250	25.5	32	14.5	M12	20	0.6

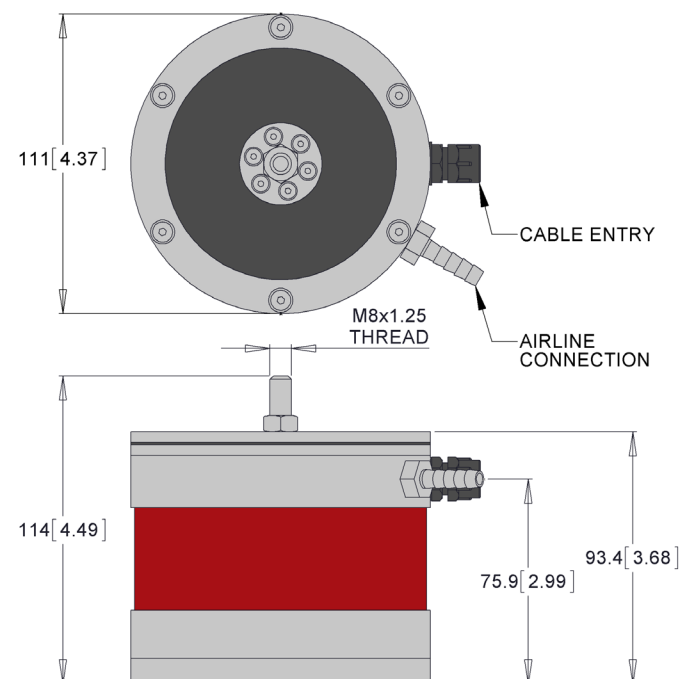
The spring mass resonant frequency is determined by the stiffness of the installed suspension units. The above table shows the spring mass resonant frequency for standard units, however, customers may specify any frequency over the range 12 Hz to 60 Hz as an option. A manufacturing accuracy of better than 2 Hz can be obtained.

The full force is produced at the spring mass resonant frequency and this may be much higher than the rated output.

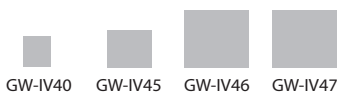
GW-IV40



GW-IV45

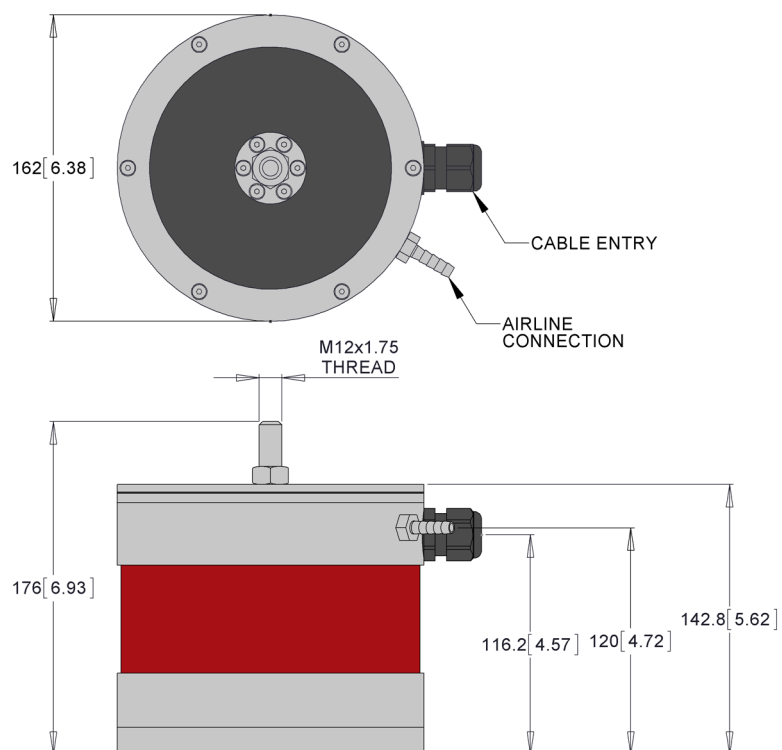


Relative scale, shaker only:

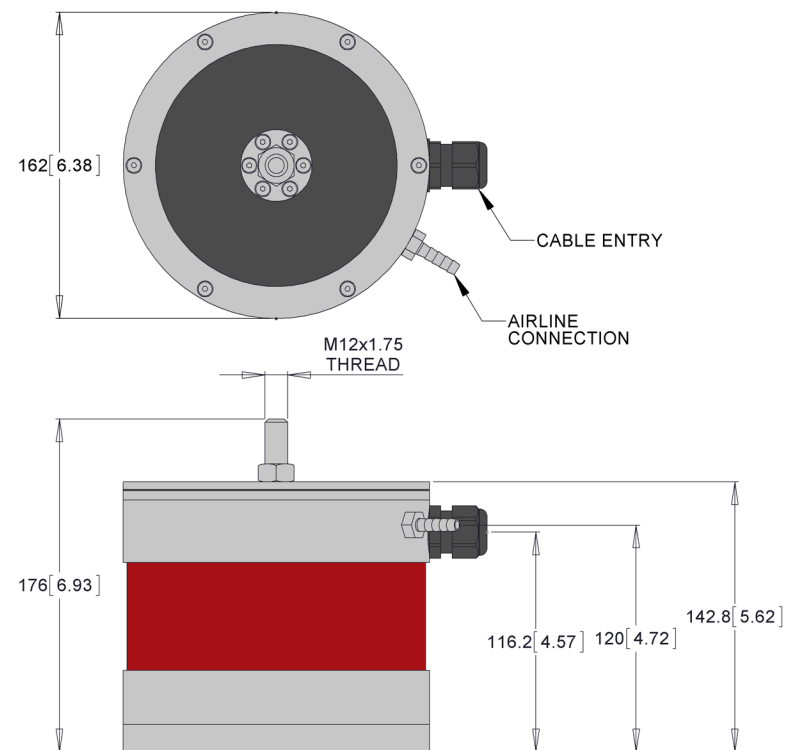


Measures are in millimeters [inches].

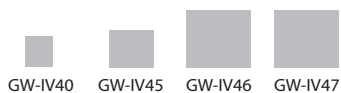
GW-IV46



GW-IV47

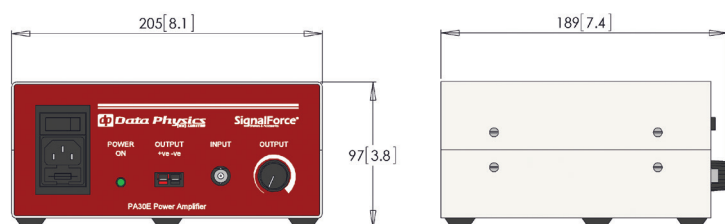


Relative scale, shaker only:

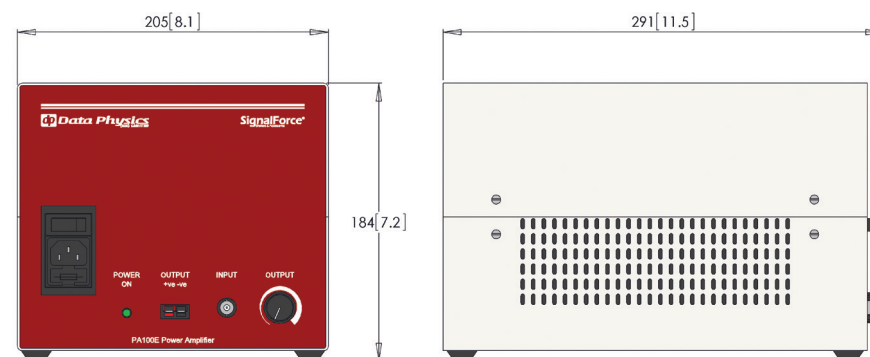


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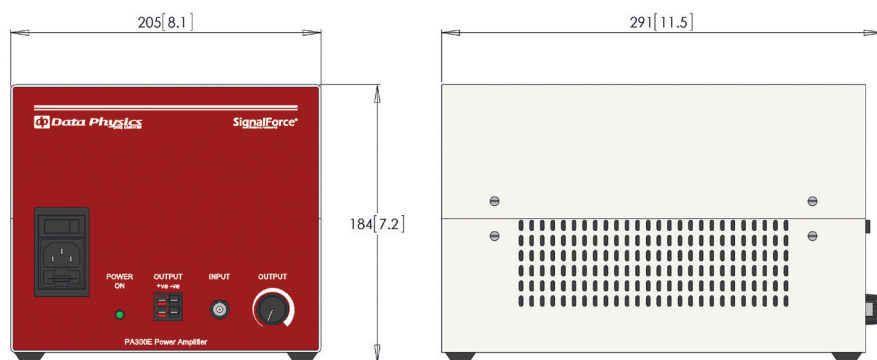
PA30E



PA100E



PA300E



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