Water Cooled Shakers



LE-2016 LE-4022 LE-5022

- Peak Sine Force: 18000 lbf (80 kN) to 50,000 lbf (222 kN)
- Velocity Peak: 71 ips (1.8 m/sec)
- Dual Hydrostatic Bearings
- Superior axial and torsional stability
- Automatic load support and armature centering
- Payload Support up to 3,000 lbs (1,365 kg)
- Large force systems include chillers



Options

- Custom designed head expanders utilizing 3-D modeling and FEA analysis for maximum performance
- Rigid trunnions available for all models
- Multiple suspension configurations
- Various amplifier configurations for maximized efficiency
- Metric and imperial table threads

Data Physics' range of water cooled shakers are used for many different applications such as testing of automotive sub-assemblies, military and defense components, large electronic components, and even fully assembled satellites. By utilizing the dual hydrostatic bearings that are incorporated in the shaker design,

payloads with high overturning moments can be tested without the need for external guidance systems. When direct coupled, the Data Physics water cooled shakers offer superior low harmonic distortion performance at very low frequencies and maximum displacement. This linear response is the result of inherent engineering discipline, where copper material is added to the center pole and the body, and cancelling the apparent inductance which otherwise makes for non-linear response at low frequencies. The water cooled shakers may also be supplied with horizontal slip table systems for 3 axis testing.

	LE-2016/DSA10-80K	LE-2016/DSA10-160K	LE-2016/DSA10-200K			
Sine Force- peak	18000 lbf (80 kN)	20250 lbf (90 kN)	20250 lbf (90 kN)			
Random Force- rms	13000 lbf (57.8 kN)	16000 lbf (71.2 kN)	20000 lbf (89 kN)			
Armature Mass						
Armature Diameter						
Max. Acceleration (bare table) *	⁴ 144 g (1412 m/s2)	160 g (1569 m/s2)	160 g (1569 m/s2)			
Maximum Velocity						
Displacement peak-peak						
Frequency Range						
Armature Axial Resonance						
Armature Suspension	Flat Composite					
Static Load Support						
Stray Magnetic Field						
Facility Power Requirements	150 KVA	210 KVA	250 KVA			
Uncrated Weight						

	LE-4022/DSA10-200K	LE-4022/DSA10-240K	LE-5022/DSA10-240K	LE-5022/DSA10-300K	LE-5022/DSA10-360K		
Sine Force- peak	32600 lbf (145 kN)	40500 lbf (180 kN)	40500 lbf (180 kN)	45000 lbf (200 kN)	50000 lbf (222 kN)		
Random Force- rms	28000 lbf (124.6 kN)	32000 lbf (142 kN)	36000 lbf (160 kN)	36300 lbf (161 kN)	38000 lbf (169 kN)		
Armature Mass	260 lbs. (118 kg)						
Armature Diameter	23.6 inch (600 mm)						
Max. Acceleration (bare table)*	125 g (1225 m/s2)	155 g (1520 m/s2)	155 g (1520 m/s2)	173 g (1696 m/s2)	192 g (1882 m/s2)		
Maximum Velocity	71 ips (1.8 m/sec.)						
Displacement peak-peak	2.0 inch (50.8 mm)		1.5 inch (38.1 mm)				
Frequency Range	5-3000 Hz						
Armature Axial Resonance	1750 Hz		1760 Hz				
Armature Suspension	Half loop beryllium copper						
Static Load Support	3000 lbs. (1364 kg)						
Stray Magnetic Field	<10 gauss (1.0 mT)						
Facility Power Requirements	250 KVA	290 KVA	315 KVA	390 KVA	450 KVA		
Uncrated Weight	14000 lbs. (6350 kg)						

* Note - Theoretical "bare table" acceleration numbers based on F=ma calculations. The shakers should not be driven beyond 100g bare table.













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Discover more at www.dataphysics.com

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