

LW139.141-75 Vibration System

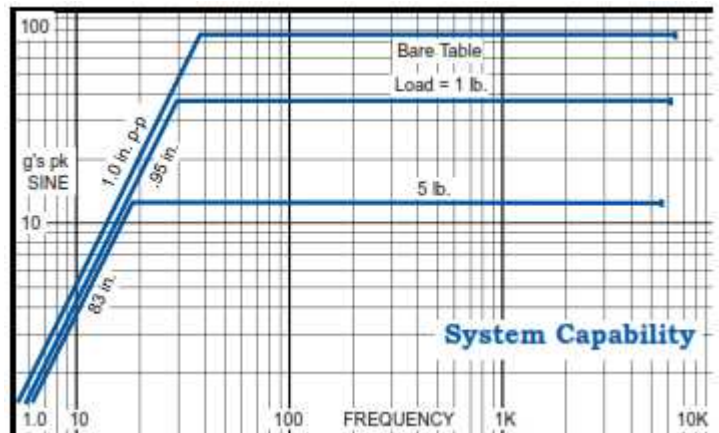


The LW139.141-75 is our most powerful permanent magnet shaker system. This system is intended for use when test specifications require full performance from the ET-139 shaker. It is used for general purpose as well as modal testing because the linear power amplifier can be operated in either voltage or current source mode as test specifications require.

General Specifications

Sine Force:	75 lbs force pk
Random Force:	28 lbf rms random
Shock Force:	75 lbf pk shock
Frequency Range:	DC to 6,500 Hz
Max. Acceleration:	75 g pk, bare table 38 g pk, 1 lb. load 12.5 g pk, 5 lb. load
Max. Displacement:	1.0 inch pk-pk
Cooling:	Amplifier: forced air Shaker: cooling blower
Power Requirements:	3,000 VA @100-125*, 200-240V, 1Ø, 50/60 Hz.

*Consult factory for low line voltage operation.



Standard trunnion allows shaker operation in any position from vertical to horizontal. The PA-141 features switched 115 Vac power provided on the amplifier for shaker cooling and optional instrumentation.

System Components*

- ET-139 Electrodynamic Shaker
- PA-141 Linear Power Amplifier
- CB-152-139 Cooling Blower
- Interconnect Cables and Hoses

System Options*

- VL-144 2 Ch. Sine, Random and Shock Controller
- VL-145 1 Ch. Digital Controller
- SC-121 Sine Servo Controller
- SG-135 Manual Sine Controller
- HE-139 Head Expander
- Rack Cabinet

*See individual components for more detailed specifications and options.

ET-139 Electrodynamic Shaker



- 75 pounds pk sine force
- 1.0 inch stroke
- 3.25 inch diameter table
- Payloads up to 7 lbs.
- Low stray magnetic field
- Frequency range DC-6,500 Hz.
- Trunnion mounting base
- Through-hole design

The ET-139 is our most powerful permanent magnet shaker. It is an excellent choice for modal testing due to its compact size and long stroke. A large armature makes the shaker ideal for general vibration testing of components and subassemblies. The standard trunnion allows operation in any position from vertical to horizontal. A unique, all flexure, armature suspension design provides excellent axial compliance with high lateral stiffness. There are no rolling or sliding components to wear out and/or produce unwanted noise and distortion. The shaker body's through-hole design allows operation with modal stingers as well as tension wire set ups.

General Specifications¹

Performance

Sine force	
Natural cooling	40 lbf pk
With blower	75 lbf pk
Random force	
Natural cooling	28 lbf rms
With blower	50 lbf rms
Shock force	
	150 lbf pk
Max displacement	
Continuous pk-pk	1.0 in
Between stops	1.03 in

Physical

Armature weight	1.0 lb
Suspension stiffness	60 lb/in
Dimensions	10.4" H x 7.4" W x 6.5" D
Shaker weight	28 lbs

Options

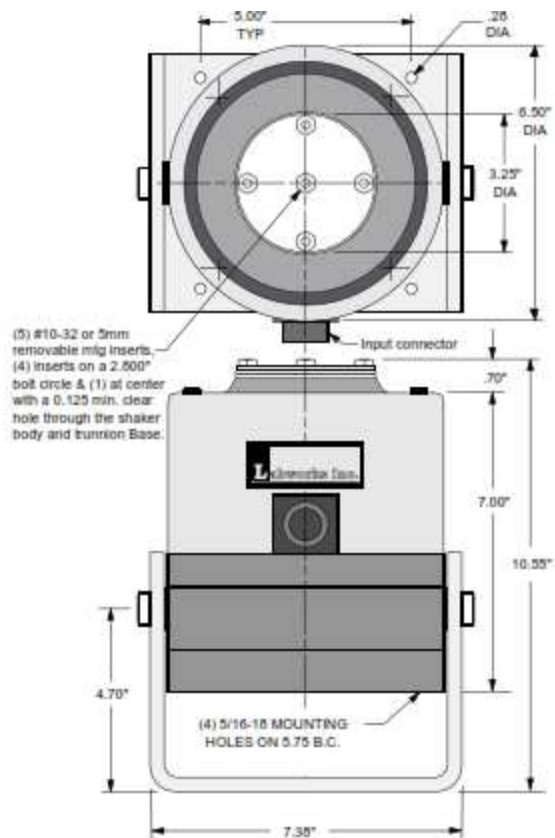
- Vibration isolation mounts. Modal stingers and mounts.
- Cooling vacuum recommended continuous for operation above 35 lbf.

■ DB-139 Duobase Flexure Table

¹ Please see systems ratings for additional specifications

² Load dependent.

Specifications subject to change.



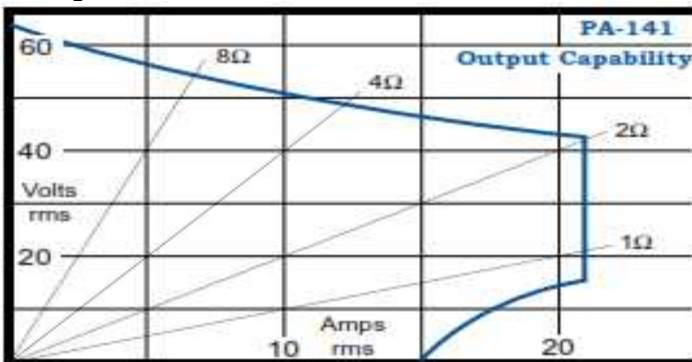
PA-141 Linear Power Amplifier



- Output: 50V, 1000 VA
- Direct coupled linear output
- Voltage and current source mode
- External interlock circuitry
- Optional shaker field supplies



The Labworks PA-141 Linear Power Amplifier has two operational modes. The amplifier can be used as either a wide-band, highly damped voltage source, or as a high impedance current source. Optional, internal DC field power supplies can be supplied for use with Labworks ET-140 and ET-127 Shakers. These options provide the convenience of a single chassis, as well as fully integrated power-up and cooling interlocks.



General Specifications*

Output voltage	50 V rms
Output current	20 A rms
Max. cont. dissipation	900 W
Frequency response	
DC input: DC to 10 KHz	-6 dB
AC input: 1.0 to 10 KHz	-6 dB
Max. voltage gain	36 dB
Cooling	2-speed fan, automatic
Input impedance	10 kΩ
Volts, pk	19 segment ± 5 %
Amps, rms	19 segment ± 5 %
Interlock circuit	
External, user	F.O. switch or TTL
Shaker, internal, optional	cooling
Optional field power	1000 W max
Input power	2000 VA (3000 w/field)
Voltage	208 or 230 Vac, 1∅
Frequency	48 to 62 Hz
Dimensions	7" H x 19" W x 17" D
Weight	48 lbs

*Specifications subject to change. Call factory for latest specifications.

CB-152

Delux, Long Life, Quiet,
Cooling Vacuum



Std: LW140-110	Opt: ET-139
LW139-75	ET-126
LW126-25	ET-132
LW160-60	ET-160
LW161-25	ET-161

General Specifications

Blower Type:	Suction (vacuum turbine)
Flow @ Pressure:	35 cfm @ 30" H ₂ O
Motor:	250 W, Brushless
Power:	115/230 Vac, 50 or 60 Hz (Specify)
Intake:	.75" and .63" dia.
Noise Level:	< 71 dB @ 1 M
Hose Length:	7.5', flexible vacuum
Blower Weight:	30 lbs.
Minimum Blower Life:	> 25,000 Hrs
Dimensions:	11H x 9.5W x 11L in.