

Model: S011-120M/SPA102B/ACU751

Typical System Application

The **Model S011-120M SPA102B** Series Vibration test system is a versatile wide frequency band electro-dynamics vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too. The model is capable of a **Random RMS force of 100 kgf** and **Sine Vector force rating of 100 kgf** in the frequency of 5 Hz to 6,000 Hz under controlled conditions. The system consists of a model S011-120M shaker and is driven by the Model SPA102B power amplifier and a 0.75 KW blower.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art Desktop air-cooled switching power amplifier, Desktop field power supply unit and an air cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to insure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

The new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency).

Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been optimized for rigidity and force transmissibility. It is designed for continuous duty and ideal for research & development, production, stress screening and qualification testing. The ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S011-120M shaker and SPA102B power amplifier (including one box of amplifier and one box of field supply) is totally air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU751 as below specification.

Rigid and Rotating Trunnion

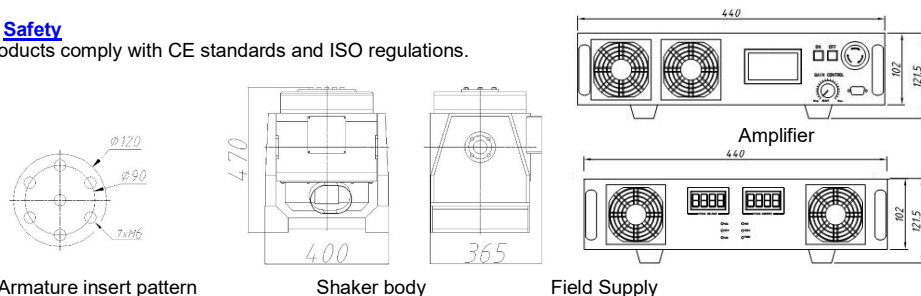
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. Trunnion is rigid connected to trunnion frame. Rubber pads which will be under the shaker will be shipped with shaker to allow direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated combo base or standalone slip table assembly.

D-Class Switching Amplifier

The state-of-art modular switching amplifiers are 100% air-cooled with sufficient safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt high quality discrete IGBT. The switching frequency range is up to standard 120 kHz. There are two boxes which is amplifier and field supply respectively.

Safety

Products comply with CE standards and ISO regulations.



Armature insert pattern

Shaker body

Field Supply

S011-120M/SPA102B/ACU751 TECHNICAL SPECIFICATIONS

Shaker Specifications S011-120M			
Sine (Peak) force	100kgf	Max. Displacement (p-p)	25mm
Random (rms) force	100kgf	Maximum Velocity	1.6 m/s
Shock (Peak) force	200kgf	Maximum Acceleration	65 g
Usable Frequency	5 to 6,000 Hz	Table Diameter	120 mm
Fundamental Resonance Frequency (Bare table)	4,700 Hz (nom.) +/- 5%	Armature Effective Nominal Weight	1.5 kg (3.3 lbs)
Body Suspension Natural Frequency (Thrust Axis)	Rigid trunnion	Load Attachment Points (Standard)	7 Stainless Steel Inserts of M6. One at center and 6 each at the 90mm BCD.
Vertical Load Support	70 kg	Weight (Uncrated)	175 kg
Stray Field @ 6 inch (152 mm) above insert	< 1 mT (10 gauss)	Overall Dimensions	400L×365D×470H mm
Degauss Coil	Standard	Air Requirement	Manual Pumped
Switching Power Amplifier Specifications SPA102B			
Rated Output Capacity	1 KVA		
Signal to Noise Ratio	Greater than 70 dB		
Switching frequency	120 kHz		
Amplifier Efficiency	Greater than 90%		
Overall Dimensions and wight	Amplifier box: 440L×580D×125H mm 30kg Field supply box: 440L×580D×125H mm 25kg		
Standard cable length from shaker to amplifier	6000mm		
Interlock Protection (to prevent the output devices from working outside their specified limits)	●Shaker Over Travel ●Shaker Over Temp ●Shaker Air Pressure ●Slip table Oil Pressure ●Shaker E Stop ●Amplifier E Stop ●Transformer Over Temp ●UART Power ●PM Over Temp ●PM Over Current ●PM Drive Power ●Input Under Voltage ●Input Over Voltage ●Output Over Voltage ●Output Over Current ●Cooling Fan ●Power Over Temp ●Logic Fault		
Air Cooling Blower ACU751			
Blower Power (Full Load)	0.75 kW		
Air Flow Rate	Air Flow: 0.1 m³/s, Air Pressure: 1 kPa.		
Air duct length (max stretched)	4000 mm		
Blower size and weight	380L×500D×1010H mm, 40kg.		
System Environmental Requirement			
Operating Room Temperature and Humidity	0 to 40 degree C. 0 to 90%, non-condensing		
Single phase, Neutral and Ground is required. 230VAC and 115VAC (50/60 Hz) available. Amplifier, field and blower are powered separately. The values are actual ones, the mains need a safety margin.	Amplifier: 1 kVA		
	Field supply: 1 kVA		
	Blower: 1 kVA		
System Options			
●Slip Table Configuration	●Thermal Barrier		
●V-Groove Caster and Rail System	●Assistant Load Support Under Head Expander		
●Head Expander	●Air Caster		

All the features make the S011-120M/SPA102B/ACU751 a reliable and affordable system for your applications.

Model: S031-150M/SPA302B/ACU751

Typical System Application

The **Model S031-150M SPA302B** Series Vibration test system is a versatile wide frequency band electro-dynamics vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too. The model is capable of a **Random RMS force of 300 kgf and Sine Vector force rating of 300 kgf** in the frequency of 5 Hz to 4,000 Hz under controlled conditions. The system consists of a model S031-150M shaker and is driven by the Model SPA302B power amplifier and 0.75 KW blower.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to insure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

The new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency).

Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been optimized for rigidity and force transmissibility. It is designed for continuous duty and ideal for research & development, production, stress screening and qualification testing. The ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S031-150M shaker and SPA302B power amplifier (including one box of amplifier and one box of field supply) is totally air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU751 as below specification.

Air-Isolated Rotating Trunnion

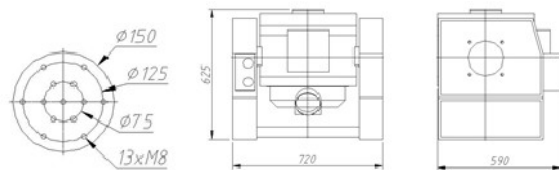
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

The state-of-art modular switching amplifiers are 100% air-cooled with sufficient safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt high quality discrete IGBT. The switching frequency range is up to standard 120 kHz. There are two boxes which is amplifier and field supply respectively.

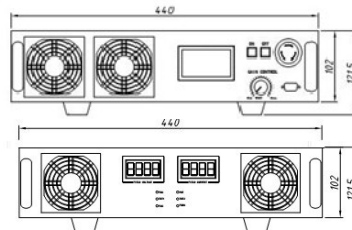
Safety

Products comply with CE standards and ISO regulations.



Armature insert pattern

Shaker body



Field Supply

S031-150M/SPA302B/ACU751 TECHNICAL SPECIFICATIONS

Shaker Specifications S031-150M			
Sine (Peak) force	300kgf	Max. Displacement (p-p)	38mm
Random (rms) force	300kgf	Maximum Velocity	2.0 m/s
Shock (Peak) force	600kgf	Maximum Acceleration	100 g
Usable Frequency	5 to 4,000 Hz	Table Diameter	150 mm
Fundamental Resonance Frequency (Bare table)	2,900 Hz (nom.) +/- 5%	Armature Effective Nominal Weight	3 kg
Body Suspension Natural Frequency (Thrust Axis)	Less than 3 Hz	Load Attachment Points (Standard)	13 Stainless Steel Inserts of M8. One at center and 6 each at the 75mm & 125mm BCD.
Vertical Load Support	70 kg	Weight (Uncrated)	600 kg
Stray Field @ 6 inch (152 mm) above insert	< 1 mT (10 gauss)	Overall Dimensions	720L×590D×625H mm
Degauss Coil	Standard	Air Requirement	0.6 Mpa
Switching Power Amplifier Specifications SPA302B			
Rated Output Capacity	3 KVA		
Signal to Noise Ratio	Greater than 70 dB		
Switching frequency	120 kHz		
Amplifier Efficiency	Greater than 90%		
Overall Dimensions and wight	Amplifier box: 440L×580D×125H mm 33kg Field supply box: 440L×580D×125H mm 35kg		
Standard cable length from shaker to amplifier	6000mm		
Interlock Protection (to prevent the output devices from working outside their specified limits)	●Shaker Over Travel ●Shaker Over Temp ●Shaker Air Pressure ●Slip table Oil Pressure ●Shaker E Stop ●Amplifier E Stop ●Transformer Over Temp ●UART Power ●PM Over Temp ●PM Over Current ●PM Drive Power ●Input Under Voltage ●Input Over Voltage ●Output Over Voltage ●Output Over Current ●Cooling Fan ●Power Over Temp ●Logic Fault		
Air Cooling Blower ACU751			
Blower Power (Full Load)	0.75 kW		
Air Flow Rate	Air Flow: 0.1 m³/s, Air Pressure: 1 kPa.		
Air duct length (max stretched)	4000 mm		
Blower size and weight	380L×500D×1010H mm, 40kg.		
System Environmental Requirement			
Operating Room Temperature and Humidity	0 to 40 degree C. 0 to 90%, non-condensing		
Single phase, Neutral and Ground is required. 230VAC and 115VAC (50/60 Hz) available.	Amplifier: 2.2 kVA		
Amplifier, field and blower are powered separately. The values are actual ones, the mains need a safety margin.	Field supply: 2.5 kVA		
	Blower: 1 kVA		
System Options			
● Slip Table Configuration	● Thermal Barrier		
● V-Groove Caster and Rail System	● Assistant Load Support Under Head Expander		
● Head Expander	● Air Caster		

All the features make the S031-150M/SPA302B/ACU751 a reliable and affordable system for your applications.

Model: S061-230M/SPA602B/ACU402

Typical System Application

The **Model S061-230M SPA602B** Series Vibration test system is a versatile wide frequency band electrodynamics vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too.

The model is capable of a **Random RMS force of 690 kgf and Sine Vector force rating of 690 kgf** in the frequency of 5 Hz to 4,000 Hz under controlled conditions. The system consists of a model S061-230M shaker and is driven by the Model SPA602B power amplifier and a 4 KW cooling blower.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air-cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to insure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S061-230M shaker and SPA602B power amplifier is totally air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU402 as below specification.

Air-Isolated Rotating Trunnion

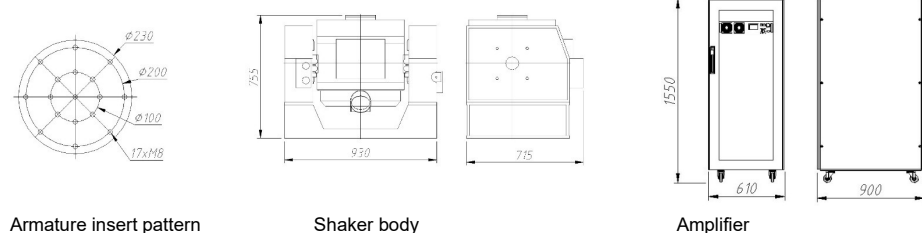
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



Armature insert pattern

Shaker body

Amplifier

S061-230M/SPA602B/ACU402 TECHNICAL SPECIFICATIONS

Shaker Specifications		S061-230M	
Sine (Pk)	690kgf	Table Diameter	230 mm
Random (RMS)	690kgf	Load Attachment Points (Standard)	Stainless Steel Inserts of M8.
Shock (Pk) @ 6ms	1,380kgf	Degauss Coil	Standard
Usable Frequency	5 to 4,000 Hz	Stray Flux Density @6 inch (152 mm) above Insert	< 1 mT (10 gauss)
Maximum Displacement (p-p)	48mm for sine sweeping 52mm for shock	Overall Dimensions	930mmL×715mmD×755mmH
Maximum Velocity	2 m/s	Vertical Load Support	300 kg
Maximum Acceleration	100 g	Weight of Shaker (Uncrated)	860 kg
Fundamental Resonance Frequency (Bare table)	3,500 Hz (nom.) +/- 5%	Compressed Requirement	Air 0.6 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 3 Hz		
Armature Effective Nominal Weight	6.9 kg Magnesium alloy		

Power Amplifier Specifications		SPA602B
Rated Output Capacity		6KVA
Signal to Noise Ratio		Greater than 70 dB
Amplifier Efficiency		Greater than 90%
Amplifier weight		300 kg
Standard cable length from shaker to amplifier		6 meters
Interlock Protection (to prevent the output devices from working outside their specified limits)		●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Air Cooling Blower		ACU402
Blower Power (Full Load)		4 kW
Air Flow Rate		Air Flow: 0.33 m³/s, Air Pressure: 3.5 kPa
Air duct length (max stretched)		4000 mm
Blower size and weight		610L×750D×1450H mm, 120kg.

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non-condensing
Amplifier Power Requirement, including blower motor	220/380/415/480VAC, 50/60 Hz, 3Ph, 17.5 kVA

SYSTEM OPTIONS	
● Slip Table Configuration ● V-Groove Caster and Rail System ● Head Expander	● Thermal Barrier ● Load Support Air Compensator under head expander ● Air Caster

All the features make the S061-230M/SPA602B/ACU402 a reliable and affordable system for your applications

Model: S101-240M/SPA103C/ACU402

Typical System Application

The **Model S101-240M SPA103C** Series Vibration test system is a versatile wide frequency band electro-dynamics vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too.

The model is capable of a **Random RMS force of 1100 kgf and Sine Vector force rating of 1100 kgf** in the frequency of 5 Hz to 3,000 Hz under controlled conditions. The system consists of a model S101-240M shaker and is driven by the Model SPA103C power amplifier and a 4 KW cooling blower of ACU402.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and a cooling blower. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to insure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

o High FRF & Wide UF

Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

o Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

o Efficient Air Cooling

S101-240M shaker and SPA103C power amplifier are air cooled for easy installation and economical operation.

o Cooling Blower Unit

The suitable cooling blower is ACU402 as below specification.

o Air-Isolated Rotating Trunnion

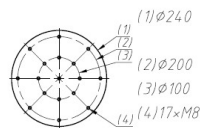
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

o D-Class Switching Amplifier

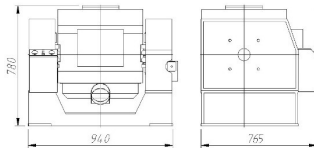
Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

o Safety

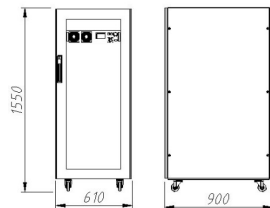
Products comply with CE standards and ISO regulations.



Armature insert pattern



Shaker body



Amplifier

S101-240M/SPA103C/ACU402 TECHNICAL SPECIFICATIONS

Shaker Specifications		S101-240M	
Sine (Pk)	1,100 kgf	Vertical Load Support	300 kg
Random (RMS)	1,100 kgf	Table Diameter	240 mm
Shock (Pk) @ 6ms	3,300 kgf	Load Attachment Points (Standard)	17 stainless steel M8 Inserts
Usable Frequency	5 to 3,000 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	51mm	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2 m/s	Overall Dimensions	940mmL×765mmD×780mm H
Maximum Acceleration	100 g	Weight of Shaker (Uncrated)	1,000 kg
Fundamental Resonance Frequency (Bare table)	2,500 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 3 Hz		
Armature Effective Nominal Weight	11 kg Magnesium alloy		

Power Amplifier Specifications		SPA-103C
Rated Output Capacity	10 kVA	
Signal to Noise Ratio	Greater than 75 dB	
Amplifier Efficiency	Greater than 90%	
Amplifier weight	300 kg	
Standard cable length from shaker to amplifier	6 meters	
Interlock Protection (to prevent the output devices from working outside their specified limits)	●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp	

Blower Specifications		ACU402
Blower Power (Full Load)	4 kW	
Air Flow Rate	Air Flow: 0.33 m³/s, Air Pressure: 3.5 kPa	
Air duct length (max stretched)	4000 mm	
Blower size and weight	610L×750D×1450H mm, 120kg.	

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, including blower motor	380/415/480 VAC, 50 Hz, 3Ph, 22 kVA (60 Hz as an option)

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator under head expander ●Air Caster

All the features make the S101-240M/SPA103C/ACU402 a reliable and affordable system for your applications

Model: S101-335M/SPA103C/ACU402

Typical System Application

The **Model S101-335M SPA103C** Series Vibration test system is a versatile wide frequency band electro-dynamics vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too.

The model is capable of a **Random RMS force of 1100 kgf and Sine Vector force rating of 1100 kgf** in the frequency of 5 Hz to 3,500 Hz under controlled conditions. The system consists of a model S101-335M shaker and is driven by the Model SPA103C power amplifier and a 4 KW cooling blower of ACU402.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and a cooling blower. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to insure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

o High FRF & Wide UF

Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

o Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

o Efficient Air Cooling

S101-335M shaker and SPA103C power amplifier are air cooled for easy installation and economical operation.

o Cooling Blower Unit

The suitable Cooling blower is ACU402 as below specification.

o Air-Isolated Rotating Trunnion

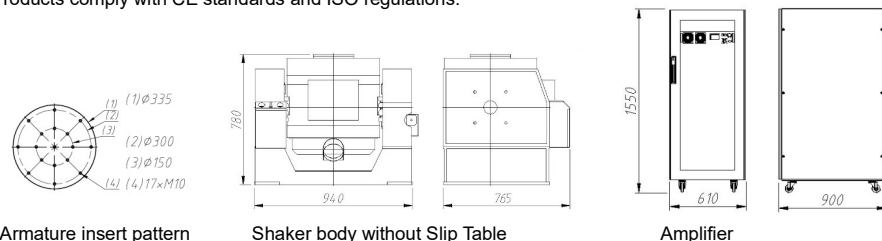
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

o D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

o Safety

Products comply with CE standards and ISO regulations.



S101-335M/SPA103C/ACU402 TECHNICAL SPECIFICATIONS

Shaker Specifications		S101-335M	
Sine (Pk)	1,100 kgf	Vertical Load Support	300 kg
Random (RMS)	1,100 kgf	Table Diameter	335 mm
Shock (Pk) @ 6ms	3,300 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 3,500 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	51mm	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2 m/s	Overall Dimensions	940mmL×765mmD×780mm H
Maximum Acceleration	85 g	Weight of Shaker (Uncrated)	1,000 kg
Fundamental Resonance Frequency (Bare table)	3,000 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 3 Hz		
Armature Effective Nominal Weight	13 kg Magnesium alloy		

Power Amplifier Specifications SPA-103C	
Rated Output Capacity	10 kVA
Signal to Noise Ratio	Greater than 75 dB
Amplifier Efficiency	Greater than 90%
Amplifier weight	300 kg
Standard cable length from shaker to amplifier	6 meters
Interlock Protection (to prevent the output devices from working outside their specified limits)	●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Blower Specifications ACU402	
Blower Power (Full Load)	4 kW
Air Flow Rate	Air Flow: 0.33 m³/s, Air Pressure: 3.5 kPa
Air duct length (max stretched)	4000 mm
Blower size and weight	610L×750D×1450H mm, 120kg.

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, including blower motor	380/415/480 VAC, 50 Hz, 3Ph, 22 kVA (60 Hz as an option)

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator under head expander ●Air Caster

All the features make the S101-335M/SPA103C/ACU402 a reliable and affordable system for your applications.

Model: S101LS3-240M/SPA103C/ACU402

Typical System Application

The **Model S101LS3-240M SPA103C** Vibration Test System is a versatile wide frequency band electro-dynamics vibration test system. The feature of the long stroke of 3 inches was designed to meet today's demanding high displacement random and shock test requirements with small to medium sized specimen such as use in the automotive, aerospace, defence, electronic and electrical machinery production sectors. Such kind of shakers can do some tests which need hydraulic shaker or shock machine. The long stroke series increases the spectrum of your lab's testing capability without requiring extra area and cost. The shaker systems all comply with ISO-5344.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air-cooled unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to insure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S101LS3-240M shaker and SPA103C power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU402 as below specification.

Air-Isolated Rotating Trunnion

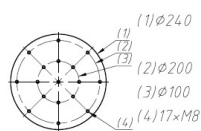
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

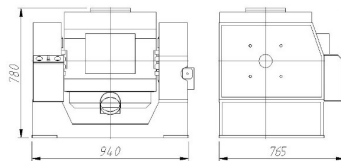
Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

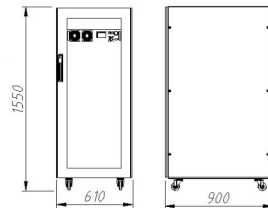
Products comply with European tests standards and ISO regulations.



Armature insert pattern



Shaker body



Amplifier

S101LS3-240M/SPA103C/ACU402 TECHNICAL SPECIFICATIONS

Shaker Specifications		S101LS3-240M	
Sine (Pk)	1,100 kgf	Vertical Load Support	300 kg
Random (RMS)	1,100 kgf	Table Diameter	240 mm
Shock (Pk) @ 6ms	3,300 kgf	Load Attachment Points (Standard)	17 stainless steel M8 Inserts
Usable Frequency	5 to 2,900 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	76mm intermittence 63mm continuous	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2.0 m/s	Overall Dimensions	940mmL×765mmD×780mm H
Maximum Acceleration	85 g	Weight of Shaker (Uncrated)	1,000 kg
Fundamental Resonance Frequency (Bare table)	2,500 Hz (nom.) +/- 5%	Compressed Air requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 3 Hz		
Armature Effective Nominal Weight	13 kg Magnesium alloy		

Power Amplifier Specifications SPA-103C	
Rated Output Capacity	10 kVA
Signal to Noise Ratio	Greater than 75 dB
Amplifier Efficiency	Greater than 90%
Amplifier weight	300 kg
Standard cable length from shaker to amplifier	6 meters
Interlock Protection (to prevent the output devices from working outside their specified limits)	●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Blower Specifications ACU402	
Blower Power (Full Load)	4 kW
Air Flow Rate	Air Flow: 0.33 m³/s, Air Pressure: 3.5 kPa
Air duct length (max stretched)	4000 mm
Blower size and weight	610L×750D×1450H mm, 120kg.

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, including blower motor	380/415/480 VAC, 50 Hz, 3Ph, 22 kVA (60 Hz as an option)

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator under head expander ●Air Caster ●

All the features make the S101LS3-240M/SPA103C/ACU402 a reliable and affordable system for your applications.

Model: S201-335/SPA203A/ACU752

Typical System Application

The **Model S201-335 SPA203A** Series Vibration test system is a versatile wide frequency band electro-dynamics vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too.

The model is capable of a **Random RMS force of 2200 kgf and Sine Vector force rating of 2400 kgf** in the frequency of 5 Hz to 3,000 Hz under controlled conditions. The system consists of a model S201-335 shaker and is driven by the Model SPA203A power amplifier and an ACU752 (7.5 KW motor) cooling blower.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling blower. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to insure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S201-335 shaker and SPA203A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU752 as below specification.

Air-Isolated Rotating Trunnion

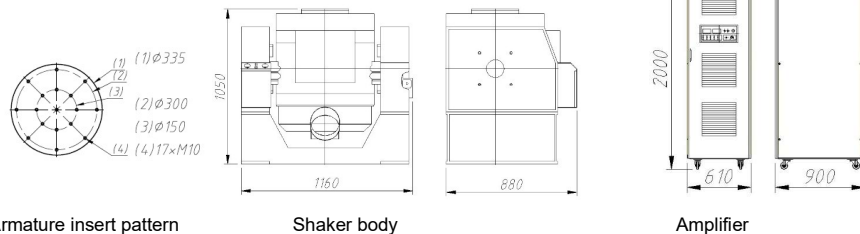
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



S201-335/SPA203A/ACU752 TECHNICAL SPECIFICATIONS

Shaker Specifications		S201-335	
Sine (Pk)	2,400 kgf	Vertical Load Support	300 kg
Random (RMS)	2,200 kgf	Table Diameter	335 mm
Shock (Pk)	4,800 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 3,000 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	51mm	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2 m/s	Overall Dimensions	1160mmL×880mmD×1050mmH
Maximum Acceleration	100 g	Weight of Shaker (Uncrated)	1,700 kg
Fundamental Resonance Frequency (Bare table)	2,600 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz		
Armature Effective Nominal Weight	24 kg		

Power Amplifier Specifications		SPA-203A
Rated Output Capacity	20 kVA	
Signal to Noise Ratio	Greater than 65 dB	
Amplifier Efficiency	Greater than 90%	
Amplifier weight	460 kg	
Standard cable length from shaker to amplifier	6 meters	
Interlock Protection (to prevent the output devices from working outside their specified limits)	●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp	

Blower Specifications		ACU752
Blower Power (Full Load)	7.5 kW	
Air Flow Rate	Air Flow: 0.46 m ³ /s, Air Pressure: 8.8 kPa	
Air duct length (max stretched)	4500 mm	
Blower size and weight	700L×950D×1500H mm, 180kg.	

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, including blower motor	380/415/480 VAC, 50 Hz, 3Ph, 42 kVA (60 Hz as an option)

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator under head expander ●Air Caster ●Remote control hard ware and soft ware

All the features make the S201-335/SPA203A/ACU752 a reliable and affordable system for your applications.

Model: S201-335M/SPA203A/ACU752

Typical System Application

The **Model S201-335M SPA203A** Series Vibration test system is a versatile wide frequency band electro-dynamics vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too.

The model is capable of a **Random RMS force of 2200 kgf and Sine Vector force rating of 2200 kgf** in the frequency of 5 Hz to 2,800 Hz under controlled conditions. The system consists of a model S201-335M shaker and is driven by the Model SPA203A power amplifier and an ACU752 (7.5 KW motor) cooling blower. Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air-cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to insure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

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Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S201-335M shaker and SPA203A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU752 as below specification.

Air-Isolated Rotating Trunnion

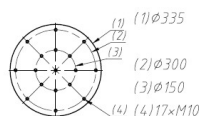
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

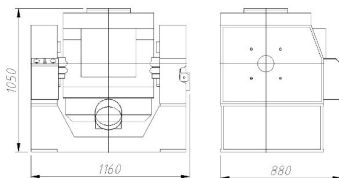
Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

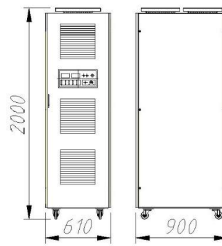
Products comply with CE standards and ISO regulations.



Armature insert pattern



Shaker body



Amplifier

S201-335M/SPA203A/ACU752 TECHNICAL SPECIFICATIONS

Shaker Specifications		S201-335M	
Sine (Pk)	2,200 kgf	Vertical Load Support	300 kg
Random (RMS)	2,200 kgf	Table Diameter	335 mm
Shock (Pk)	4,400 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 2,800 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	51mm	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2 m/s	Overall Dimensions	1160mmL×880mmD×1050mmH
Maximum Acceleration	115 g	Weight of Shaker (Uncrated)	1,700 kg
Fundamental Resonance Frequency (Bare table)	2,500 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz		
Armature Effective Nominal Weight	18 kg Magnesium Alloy		

Power Amplifier Specifications SPA-203A	
Rated Output Capacity	20 kVA
Signal to Noise Ratio	Greater than 65 dB
Amplifier Efficiency	Greater than 90%
Amplifier weight	460 kg
Standard cable length from shaker to amplifier	6 meters
Interlock Protection (to prevent the output devices from working outside their specified limits)	●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Blower Specifications ACU752	
Blower Power (Full Load)	7.5 kW
Air Flow Rate	Air Flow: 0.46 m ³ /s, Air Pressure: 8.8 kPa
Air duct length (max stretched)	4500 mm
Blower size and weight	700L×950D×1500H mm, 180kg.

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, including blower motor	380/415/480 VAC, 50 Hz, 3Ph, 42 kVA (60 Hz as an option)

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S201-335M/SPA203A/ACU752 a reliable and affordable system for your applications.

Model: S201-440M/SPA203A/ACU752

Typical System Application

The **Model S201-440M SPA203A** Series Vibration test system is a versatile wide frequency band electro-dynamics vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too. The model is capable of a **Random RMS force of 2200 kgf and Sine Vector force rating of 2400 kgf** in the frequency of 5 Hz to 3,000 Hz under controlled conditions. The system consists of a model S201-440M shaker and is driven by the Model SPA203A power amplifier and an ACU752 (7.5 KW motor) cooling blower.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to ensure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S201-440M shaker and SPA203A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU752 as below specification.

Air-Isolated Rotating Trunnion

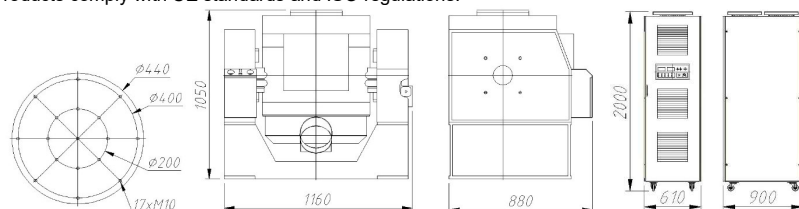
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



Armature insert pattern

Shaker body

Amplifier

S201-440M/SPA203A/ACU752 TECHNICAL SPECIFICATIONS

Shaker Specifications		S201-440M	
Sine (Pk)	2,400 kgf	Vertical Load Support	400 kg
Random (RMS)	2,200 kgf	Table Diameter	440 mm
Shock (Pk)	4,800 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 3,000 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	51mm	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2.0 m/s	Overall Dimensions	1160mmL×880mmD×1050mmH
Maximum Acceleration	100 g	Weight of Shaker (Uncrated)	1,700 kg
Fundamental Resonance Frequency (Bare table)	2,600 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz		
Armature Effective Nominal Weight	24 kg Magnesium alloy		

Power Amplifier Specifications		SPA-203A
Rated Output Capacity		20 kVA
Signal to Noise Ratio		Greater than 65 dB
Amplifier Efficiency		Greater than 90%
Amplifier weight		460 kg
Standard cable length from shaker to amplifier		6 meters
Interlock Protection (to prevent the output devices from working outside their specified limits)		●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Blower Specifications		ACU752
Blower Power (Full Load)		7.5 kW
Air Flow Rate		Air Flow: 0.46 m ³ /s, Air Pressure: 8.8 kPa
Air duct length (max stretched)		4500 mm
Blower size and weight		700L×950D×1500H mm, 180kg.

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, including blower motor	380/415/480 VAC, 50 Hz, 3Ph, 42 kVA (60 Hz as an option)

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S201-440M/SPA203A/ACU752 a reliable and affordable system for your applications.

Model: S201LS3-340/SPA203A/ACU752

Typical System Application

The **Model S201LS3-340** Vibration Test System is a versatile wide frequency band electrodynamics vibration test system. The feature of the long stroke of 3 inches was designed to meet today's demanding high displacement random and shock test requirements with small to medium sized specimen such as use in the automotive, aerospace, defence, electronic and electrical machinery production sectors. Such kind of shaker can do some tests which need hydraulic shaker or shock machine. The long stroke series increases the spectrum of your lab's testing capability without requiring extra area and cost. The shaker systems all comply with ISO-5344.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to ensure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

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Reliable Armature

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Efficient Air Cooling

S201LS3-340 shaker and SPA203A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU752 as below specification.

Air-Isolated Rotating Trunnion

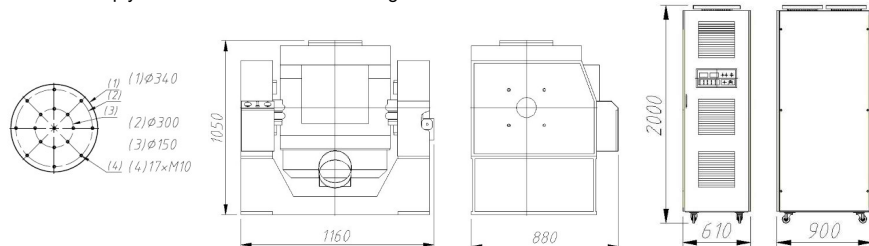
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D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



Armature insert pattern

Shaker body

Amplifier

S201LS3-340/SPA203A/ACU752 TECHNICAL SPECIFICATIONS

Shaker Specifications		S201LS3-340	
Sine (Pk)	2,200 kgf	Vertical Load Support	400 kg
Random (RMS)	2,000 kgf	Table Diameter	340 mm
Shock (Pk)	4,400 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 3,000 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	76mm intermittence 63mm continuous	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2 m/s	Overall Dimensions	1160mmL×880mmD×1050mmH
Maximum Acceleration	88 g	Weight of Shaker (Uncrated)	1,700 kg
Fundamental Resonance Frequency (Bare table)	2,700 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz		
Armature Effective Nominal Weight	25 kg		

Power Amplifier Specifications		SPA-203A
Rated Output Capacity		20 kVA
Signal to Noise Ratio		Greater than 65 dB
Amplifier Efficiency		Greater than 90%
Amplifier weight		460 kg
Standard cable length from shaker to amplifier		6 meters
Interlock Protection (to prevent the output devices from working outside their specified limits)		●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Blower Specifications		ACU752
Blower Power (Full Load)		7.5 kW
Air Flow Rate		Air Flow: 0.46 m ³ /s, Air Pressure: 8.8 kPa
Air duct length (max stretched)		4500 mm
Blower size and weight		700L×950D×1500H mm, 180kg.

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, including blower motor	380/415/480 VAC, 50 Hz, 3Ph, 42 kVA (60 Hz as an option)

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S201LS3-340/SPA203A/ACU752 a reliable and affordable system for your applications.

Model: S201LS3-340M/SPA203A/ACU752

Typical System Application

The **Model S201LS3-340M** Vibration Test System is a versatile wide frequency band electrodynamic vibration test system. The feature of the long stroke of 3 inches was designed to meet today's demanding high displacement random and shock test requirements with small to medium sized specimen such as use in the automotive, aerospace, defence, electronic and electrical machinery production sectors. Such kind of shakers can do some tests which need hydraulic shaker or shock machine. The long stroke series increases the spectrum of your lab's testing capability without requiring extra area and cost. The shaker systems all comply with ISO-5344.

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How to select the suitable model

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Efficient Air Cooling

S201LS3-340M shaker and SPA203A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU752 as below specification.

Air-Isolated Rotating Trunnion

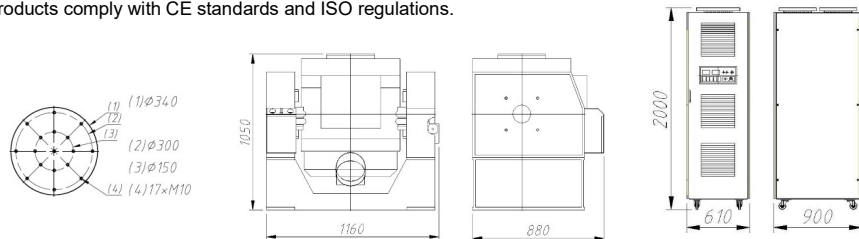
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



Armature insert pattern

Shaker body

Amplifier

S201LS3-340M/SPA203A/ACU752 TECHNICAL SPECIFICATIONS

Shaker Specifications		S201LS3-340M	
Sine (Pk)	2,200 kgf	Vertical Load Support	400 kg
Random (RMS)	2,000 kgf	Table Diameter	340 mm
Shock (Pk)	4,400 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 2,800 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	76mm intermittence 63mm continuous	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2 m/s	Overall Dimensions	1160mmL×880mmD×1050mmH
Maximum Acceleration	100 g	Weight of Shaker (Uncrated)	1,700 kg
Fundamental Resonance Frequency (Bare table)	2,400 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz		
Armature Effective Nominal Weight	20 kg Magnesium Alloy		

Power Amplifier Specifications		SPA-203A
Rated Output Capacity		20 kVA
Signal to Noise Ratio		Greater than 65 dB
Amplifier Efficiency		Greater than 90%
Amplifier weight		460 kg
Standard cable length from shaker to amplifier		6 meters
Interlock Protection (to prevent the output devices from working outside their specified limits)		●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Blower Specifications		ACU752
Blower Power (Full Load)		7.5 kW
Air Flow Rate		Air Flow: 0.46 m ³ /s, Air Pressure: 8.8 kPa
Air duct length (max stretched)		4500 mm
Blower size and weight		700L×950D×1500H mm, 180kg.

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, including blower motor	380/415/480 VAC, 50 Hz, 3Ph, 42 kVA (60 Hz as an option)

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S201LS3-340M/SPA203A/ACU752 a reliable and affordable system for your applications.

Model: S201LS4-340/SPA203A/ACU752

Typical System Application

The **Model S201LS4-340** Vibration Test System is a versatile wide frequency band electrodynamics vibration test system. The feature of the long stroke of 4 inches was designed to meet today's demanding high displacement random and shock test requirements with small to medium sized specimen such as use in the automotive, aerospace, defence, electronic and electrical machinery production sectors. Such kind of shakers can do some tests which need hydraulic shaker or shock machine. It is very useful for the typical shock testing specification of 100g@11ms when the shaker system is configured with higher amplifier output and low/high field supply. The long stroke series increases the spectrum of your lab's testing capability without requiring extra area and cost. The shaker systems all comply with ISO-5344.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to ensure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S201LS4-340 shaker and SPA203A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU752 as below specification.

Air-Isolated Rotating Trunnion

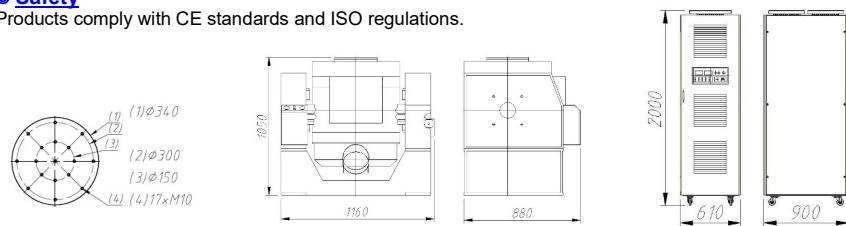
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



Armature insert pattern

Shaker body

Amplifier

S201LS4-340/SPA203A/ACU752 TECHNICAL SPECIFICATIONS

Shaker Specifications		S201LS4-340	
Sine (Pk)	2,200 kgf	Vertical Load Support	400 kg
Random (RMS)	2,000 kgf	Table Diameter	340 mm
Shock (Pk)	4,400 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 2,800 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	100mm intermittence 90mm continuous	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2.0 m/s	Overall Dimensions	1160mmL×880mmD×1050mmH
Maximum Acceleration	73 g	Weight of Shaker (Uncrated)	1,700 kg
Fundamental Resonance Frequency (Bare table)	2,600 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz		
Armature Effective Nominal Weight	30 kg		

Power Amplifier Specifications SPA-203A	
Rated Output Capacity	20 kVA
Signal to Noise Ratio	Greater than 65 dB
Amplifier Efficiency	Greater than 90%
Amplifier weight	460 kg
Standard cable length from shaker to amplifier	6 meters
Interlock Protection (to prevent the output devices from working outside their specified limits)	●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Blower Specifications		ACU752
Blower Power (Full Load)	7.5 kW	
Air Flow Rate	Air Flow: 0.46 m ³ /s, Air Pressure: 8.8 kPa	
Air duct length (max stretched)	4500 mm	
Blower size and weight	700L×950D×1500H mm, 180kg.	

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, including blower motor	380/415/480 VAC, 50 Hz, 3Ph, 42 kVA (60 Hz as an option)

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S201LS4-340/SPA203A/ACU752 a reliable and affordable system for your applications.

Model: S301-340/SPA303A/ACU752

Typical System Application

The **Model S301-340 SPA303A** Series Vibration test system is a versatile wide frequency band electrodynamics vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too.

The model is capable of a **Random RMS force of 3000 kgf and Sine Vector force rating of 3000 kgf** in the frequency of 5 Hz to 3,000 Hz under controlled conditions. The system consists of a model S301-340 shaker and is driven by the Model SPA303A power amplifier and a 7.5 KW cooling blower.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to ensure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S301-340 shaker and SPA303A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU752 as below specification.

Air-Isolated Rotating Trunnion

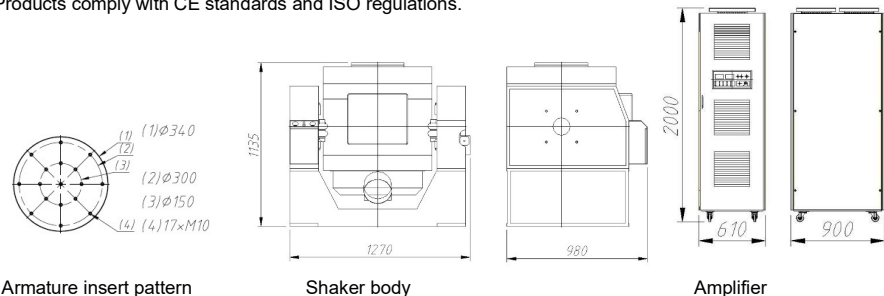
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



S301-340/SPA303A/ACU752 TECHNICAL SPECIFICATIONS

Shaker Specifications S301-340			
Sine (Pk)	3,000 kgf	Vertical Load Support	500 kg
Random (RMS)	3,000 kgf	Table Diameter	340 mm
Shock (Pk)	6,000 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 3,000 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	51mm	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2 m/s	Overall Dimensions	1270mmL×980mmD×1135mmH
Maximum Acceleration	100 g	Weight of Shaker (Uncrated)	2,500 kg
Fundamental Resonance Frequency (Bare table)	2,500 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz		
Armature Effective Nominal Weight	30 kg		

Power Amplifier Specifications SPA303A	
Rated Output Capacity	30 kVA
Signal to Noise Ratio	Greater than 65 dB
Amplifier Efficiency	Greater than 90%
Amplifier weight	500 kg
Standard cable length from shaker to amplifier	6 meters
Interlock Protection (to prevent the output devices from working outside their specified limits)	●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Blower Specifications ACU752	
Blower Power (Full Load)	7.5 kW
Air Flow Rate	Air Flow: 0.46 m ³ /s, Air Pressure: 8.8 kPa
Air duct length (max stretched)	4500 mm
Blower size and weight	700L×950D×1500H mm, 180kg.

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, including blower motor	380/415/480 VAC, 50 Hz, 3Ph, 56 kVA (60 Hz as an option)

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S301-340/SPA303A/ACU752 a reliable and affordable system for your applications.

Model: S301-340/SPA403A/ACU153

Typical System Application

The **Model S301-340 SPA403A** Series Vibration test system is a versatile wide frequency band electro-dynamics vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too.

The model is capable of a **Random RMS force of 3800 kgf and Sine Vector force rating of 3800 kgf** in the frequency of 5 Hz to 3,000 Hz under controlled conditions. The system consists of a model S301-340 shaker and is driven by the Model SPA403A power amplifier and a 15 KW cooling blower.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to ensure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S301-340 shaker and SPA403A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU153 as below specification.

Air-Isolated Rotating Trunnion

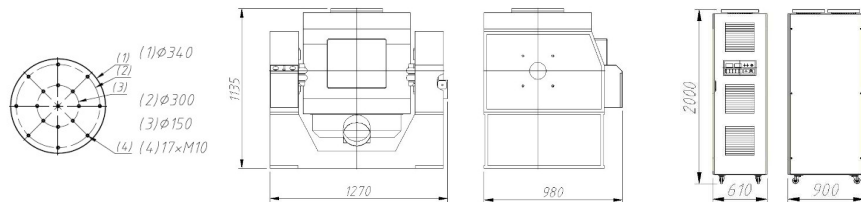
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



Armature insert pattern

Shaker body

Amplifier

S301-340/SPA403A/ACU153 TECHNICAL SPECIFICATIONS

Shaker Specifications S301-340			
Sine (Pk)	3,800 kgf	Vertical Load Support	500 kg
Random (RMS)	3,800 kgf	Table Diameter	340 mm
Shock (Pk)	7,600 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 3,000 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	51mm	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2 m/s	Overall Dimensions	1270mmL×980mmD×1135mm H
Maximum Acceleration	115 g	Weight of Shaker (Uncrated)	2,500 kg
Fundamental Resonance Frequency (Bare table)	2,500 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz		
Armature Effective Nominal Weight	30 kg		

Power Amplifier Specifications SPA403A	
Rated Output Capacity	40 kVA
Signal to Noise Ratio	Greater than 65 dB
Amplifier Efficiency	Greater than 90%
Amplifier weight	520 kg
Standard cable length from shaker to amplifier	6 meters
Interlock Protection(to prevent the output devices from working outside their specified limits)	●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Blower Specifications ACU153	
Blower Power (Full Load)	15 kW
Air Flow Rate	Air Flow: 1.1m ³ /s, Air Pressure: 7.7 kPa
Air duct length (max stretched)	4500 mm
Blower size and weight	1050L×897D×1970H mm, 320kg.

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, exclusive blower motor which draws power separately from site distributor	380/415/480 VAC, 50 Hz, 3Ph, 56kVA+20kVA (for blower), (60 Hz as an option).

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S301-340/SPA403A/ACU153 a reliable and affordable system for your applications.

Model: S301-340M/SPA303A/ACU752

Typical System Application

The **Model S301-340M** Series Vibration test system is a versatile wide frequency band electrodynamic vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too.

The model is capable of a **Random RMS force of 3000 kgf and Sine Vector force rating of 3000 kgf** in the frequency of 5 Hz to 2,800 Hz under controlled conditions. The system consists of a model S301-340M shaker and is driven by the Model SPA303 power amplifier and a 7.5 KW cooling blower.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to insure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S301-340M shaker and SPA303A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU752 as below specification.

Air-Isolated Rotating Trunnion

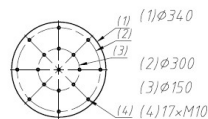
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D-Class Switching Amplifier

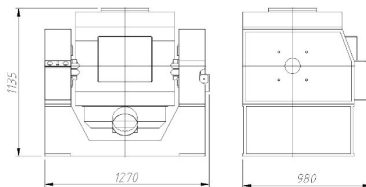
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Safety

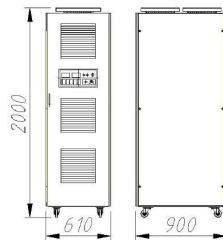
Products comply with CE standards and ISO regulations.



Armature insert pattern



Shaker body



Amplifier

S301-340M/SPA303A/ACU752 TECHNICAL SPECIFICATIONS

Shaker Specifications		S301-340M	
Sine (Pk)	3,000 kgf	Vertical Load Support	500 kg
Random (RMS)	3,000 kgf	Table Diameter	340 mm
Shock (Pk)	6,000 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 2,800 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	51mm	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2 m/s	Overall Dimensions	1270mmL×980mmD×1135mm H
Maximum Acceleration	115 g	Weight of Shaker (Uncrated)	2,500 kg
Fundamental Resonance Frequency (Bare table)	2,300 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz		
Armature Effective Nominal Weight	26 kg Magnesium alloy		

Power Amplifier Specifications		SPA303A	
Rated Output Capacity		30 kVA	
Signal to Noise Ratio		Greater than 65 dB	
Amplifier Efficiency		Greater than 90%	
Amplifier weight		500 kg	
Standard cable length from shaker to amplifier		6 meters	
Interlock Protection (to prevent the output devices from working outside their specified limits)		●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp	

Blower Specifications		ACU752	
Blower Power (Full Load)		7.5 kW	
Air Flow Rate		Air Flow: 0.46 m ³ /s, Air Pressure: 8.8 kPa	
Air duct length (max stretched)		4500 mm	
Blower size and weight		700L×950D×1500H mm, 180kg.	

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, including blower motor	380/415/480 VAC, 50 Hz, 3Ph, 56 kVA (60 Hz as an option)

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S301-340M/SPA303A/ACU752 a reliable and affordable system for your applications.

Model: S301-340M/SPA403A/ACU153

Typical System Application

The **Model S301-340M SPA403A** Series Vibration test system is a versatile wide frequency band electro-dynamics vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too.

The model is capable of a **Random RMS force of 3800 kgf and Sine Vector force rating of 3800 kgf** in the frequency of 5 Hz to 2,800 Hz under controlled conditions. The system consists of a model S301-340M shaker and is driven by the Model SPA403 power amplifier and a 15 KW cooling blower.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to insure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

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Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S301-340M shaker and SPA403A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU153 as below specification.

Air-Isolated Rotating Trunnion

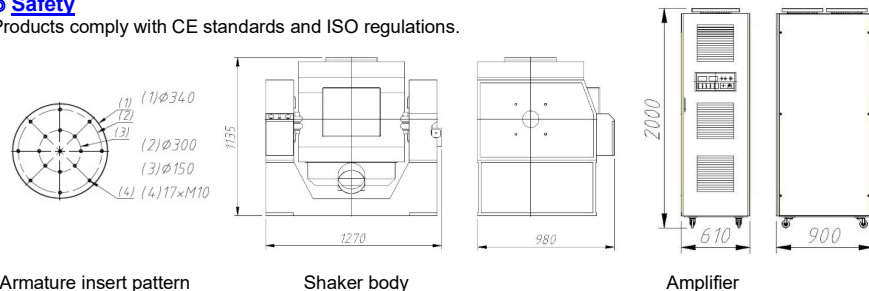
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



Armature insert pattern

Shaker body

Amplifier

S301-340M/SPA403A/ACU153 TECHNICAL SPECIFICATIONS

Shaker Specifications		S301-340M	
Sine (Pk)	3,800 kgf	Vertical Load Support	500 kg
Random (RMS)	3,800 kgf	Table Diameter	340 mm
Shock (Pk)	7,600 kgf	Load Attachment	17 stainless steel M10 Inserts
Usable Frequency	5 to 2,800 Hz	Points (Standard)	Standard
Maximum Displacement (p-p)	51mm	Degauss Coil	Standard
Maximum Velocity	2 m/s	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Acceleration	115 g	Overall Dimensions	1270mmL×980mmD×1135mmH
Fundamental Resonance Frequency (Bare table)	2,300 Hz (nom.) +/- 5%	Weight of Shaker (Uncrated)	2,500 kg
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz	Compressed Air Requirement	0.69 Mpa
Armature Effective Nominal Weight	26 kg Magnesium alloy		

Power Amplifier Specifications		SPA403A	
Rated Output Capacity		40 kVA	
Signal to Noise Ratio		Greater than 65 dB	
Amplifier Efficiency		Greater than 90%	
Amplifier weight		520 kg	
Standard cable length from shaker to amplifier		6 meters	
Interlock Protection(to prevent the output devices from working outside their specified limits)		●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp	

Blower Specifications		ACU153	
Blower Power (Full Load)		15 kW	
Air Flow Rate		Air Flow: 1.1m ³ /s, Air Pressure: 7.7 kPa	
Air duct length (max stretched)		4500 mm	
Blower size and weight		1050L×897D×1970H mm, 320kg.	

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, exclusive blower motor which draws power separately from site distributor	380/415/480 VAC, 50 Hz, 3Ph, 56kVA+20kVA (for blower), (60 Hz as an option).

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S301-340M/SPA403A/ACU153 a reliable and affordable system for your applications.

Model: S301-440M/SPA303A/ACU752

Typical System Application

The **Model S301-440M** Series Vibration test system is a versatile wide frequency band electrodynamic vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too.

The model is capable of a **Random RMS force of 3000 kgf and Sine Vector force rating of 3000 kgf** in the frequency of 5 Hz to 3,000 Hz under controlled conditions. The system consists of a model S301-440M shaker and is driven by the Model SPA303A power amplifier and a 7.5 KW cooling blower.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to ensure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

o High FRF & Wide UF

Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

o Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

o Efficient Air Cooling

S301-440M shaker and SPA303A power amplifier are air cooled for easy installation and economical operation.

o Cooling Blower Unit

The suitable Cooling blower is ACU752 as below specification.

o Air-Isolated Rotating Trunnion

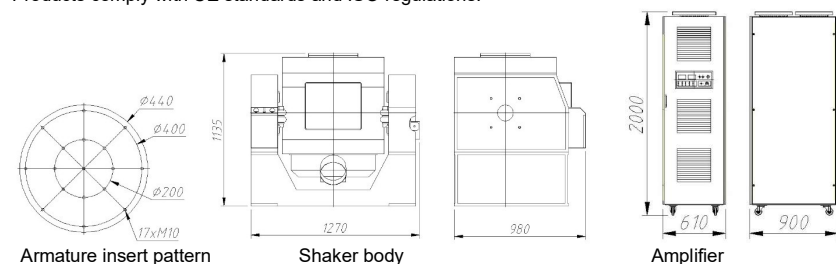
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

o D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

o Safety

Products comply with CE standards and ISO regulations.



S301-440M/SPA303A/ACU752 TECHNICAL SPECIFICATIONS

Shaker Specifications		S301-440M	
Sine (Pk)	3,000 kgf	Vertical Load Support	500 kg
Random (RMS)	3,000 kgf	Table Diameter	440 mm
Shock (Pk)	6,000 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 3,000 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	51mm	Stray Flux Density @ 6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2 m/s	Overall Dimensions	1270mmL×980mmD×1135mmH
Maximum Acceleration	100 g	Weight of Shaker (Unrated)	2,500 kg
Fundamental Resonance Frequency (Bare table)	2,500 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz		
Armature Effective Nominal Weight	30 kg Magnesium alloy		

Power Amplifier Specifications		SPA303A	
Rated Output Capacity		30 kVA	
Signal to Noise Ratio		Greater than 65 dB	
Amplifier Efficiency		Greater than 90%	
Amplifier weight		500 kg	
Standard cable length from shaker to amplifier		6 meters	
Interlock Protection (to prevent the output devices from working outside their specified limits)		●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp	

Blower Specifications		ACU752	
Blower Power (Full Load)		7.5 kW	
Air Flow Rate		Air Flow: 0.46 m ³ /s, Air Pressure: 8.8 kPa	
Air duct length (max stretched)		4500 mm	
Blower size and weight		700L×950D×1500H mm, 180kg.	

System Environmental Requirement			
Operating Room Temperature		0 to 40 degree C	
Humidity		0 to 85%, non condensing	
Amplifier Power Requirement, including blower motor		380/415/480 VAC, 50 Hz, 3Ph, 56 kVA (60 Hz as an option)	

SYSTEM OPTIONS			
●Slip Table Configuration		●Thermal Barrier	
●V-Groove Caster and Rail System		●Load Support Air Compensator	
●Table Inserts		●Air Caster	
●Head Expander		●Remote control hard ware and soft ware	

All the features make the S301-440M/SPA303A/ACU752 a reliable and affordable system for your applications.

Model: S301-440M/SPA403A/ACU153

Typical System Application

The **Model S301-440M SPA403A** Series Vibration test system is a versatile wide frequency band electro-dynamics vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too.

The model is capable of a **Random RMS force of 3800 kgf and Sine Vector force rating of 3800 kgf** in the frequency of 5 Hz to 3,000 Hz under controlled conditions. The system consists of a model S301-440M shaker and is driven by the Model SPA403A power amplifier and a 15 KW cooling blower.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to ensure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S301-440M shaker and SPA403A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU153 as below specification.

Air-Isolated Rotating Trunnion

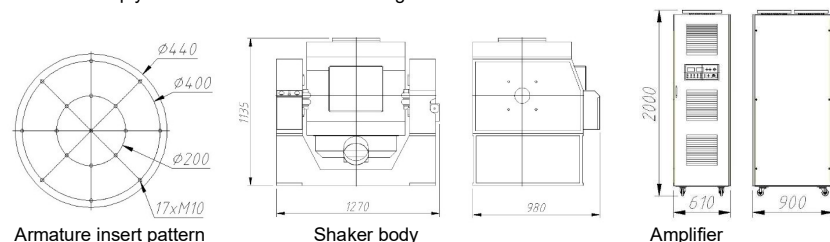
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



S301-440M/SPA403A/ACU153 TECHNICAL SPECIFICATIONS

Shaker Specifications S301-440M			
Sine (Pk)	3,800 kgf	Vertical Load Support	500 kg
Random (RMS)	3,800 kgf	Table Diameter	440 mm
Shock (Pk)	7,600 kgf	Load Attachment	
Usable Frequency	5 to 3,000 Hz	Points (Standard)	17 stainless steel M10 Inserts
Maximum Displacement (p-p)	51mm	Degauss Coil	Standard
Maximum Velocity	2 m/s	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Acceleration	115 g	Overall Dimensions	1270mmL×980mmD×1135mm H
Fundamental Resonance Frequency (Bare table)	2,500 Hz (nom.) +/- 5%	Weight of Shaker (Uncrated)	2,500 kg
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz	Compressed Air Requirement	0.69 Mpa
Armature Effective Nominal Weight	30 kg Magnesium alloy		

Power Amplifier Specifications SPA403A	
Rated Output Capacity	40 kVA
Signal to Noise Ratio	Greater than 65 dB
Amplifier Efficiency	Greater than 90%
Amplifier weight	520 kg
Standard cable length from shaker to amplifier	6 meters
Interlock Protection(to prevent the output devices from working outside their specified limits)	●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Blower Specifications ACU153	
Blower Power (Full Load)	15 kW
Air Flow Rate	Air Flow: 1.1m ³ /s, Air Pressure: 7.7 kPa
Air duct length (max stretched)	4500 mm
Blower size and weight	1050L×897D×1970H mm, 320kg.

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, exclusive blower motor which draws power separately from site distributor	380/415/480 VAC, 50 Hz, 3Ph, 56kVA+20kVA (for blower), (60 Hz as an option).

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S301-440M/SPA403A/ACU153 a reliable and affordable system for your applications.

Model: S301LS4-440M/SPA303A/ACU752

Typical System Application

The **Model S301LS4-440M/SPA303A** Vibration Test System is a versatile wide frequency band electrodynamics vibration test system. The feature of the long stroke of 4 inches was designed to meet today's demanding high displacement random and shock test requirements with small to medium sized specimen such as use in the automotive, aerospace, defence, electronic and electrical machinery production sectors. Such kind of shakers can do some tests which need hydraulic shaker or shock machine. It is very useful for the typical shock testing specification of 100g@11ms when the shaker system is configured with higher amplifier output and low/high field supply. The long stroke series increases the spectrum of your lab's testing capability without requiring extra area and cost. The shaker systems all comply with ISO-5344. Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to ensure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S301LS4-440M shaker and SPA303A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU752 as below specification.

Air-Isolated Rotating Trunnion

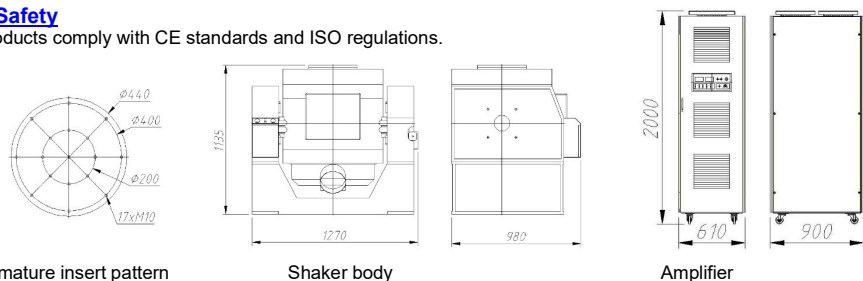
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



Armature insert pattern

Shaker body

Amplifier

S301LS4-440M/SPA303A/ACU752 TECHNICAL SPECIFICATIONS

Shaker Specifications		S301LS4-440M	
Sine (Pk)	3,000 kgf	Vertical Load Support	500 kg
Random (RMS)	3,000 kgf	Table Diameter	440 mm
Shock (Pk)	6,000 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 3,000 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	100mm intermittence 90mm continuous	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2.0 m/s	Overall Dimensions	1270mmL×980mmD×1135mmH
Maximum Acceleration	85 g	Weight of Shaker (Uncrated)	2,500 kg
Fundamental Resonance Frequency (Bare table)	2,500 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz		
Armature Effective Nominal Weight	35 kg Magnesium alloy		

Power Amplifier Specifications		SPA303A
Rated Output Capacity		30 kVA
Signal to Noise Ratio		Greater than 65 dB
Amplifier Efficiency		Greater than 90%
Amplifier weight		500 kg
Standard cable length from shaker to amplifier		6 meters
Interlock Protection (to prevent the output devices from working outside their specified limits)		●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Blower Specifications		ACU752
Blower Power (Full Load)		7.5 kW
Air Flow Rate		Air Flow: 0.46 m ³ /s, Air Pressure: 8.8 kPa
Air duct length (max stretched)		4500 mm
Blower size and weight		700L×950D×1500H mm, 180kg.

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, including blower motor	380/415/480 VAC, 50 Hz, 3Ph, 56 kVA (60 Hz as an option)

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S301LS4-440M/SPA303A/ACU752 a reliable and affordable system for your applications.

Model: S301LS4-440M/SPA403A/ACU153

Typical System Application

The **Model S301LS4-440M/SPA403A** Vibration Test System is a versatile wide frequency band electrodynamics vibration test system. The feature of the long stroke of 4 inches was designed to meet today's demanding high displacement random and shock test requirements with small to medium sized specimen such as use in the automotive, aerospace, defence, electronic and electrical machinery production sectors. Such kind of shakers can do some tests which need hydraulic shaker or shock machine. It is very useful for the typical shock testing specification of 100g@11ms when the shaker system is configured with higher amplifier output and low/high field supply. The long stroke series increases the spectrum of your lab's testing capability without requiring extra area and cost. The shaker systems all comply with ISO-5344.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to ensure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S301LS4-440M shaker and SPA403A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU153 as below specification.

Air-Isolated Rotating Trunnion

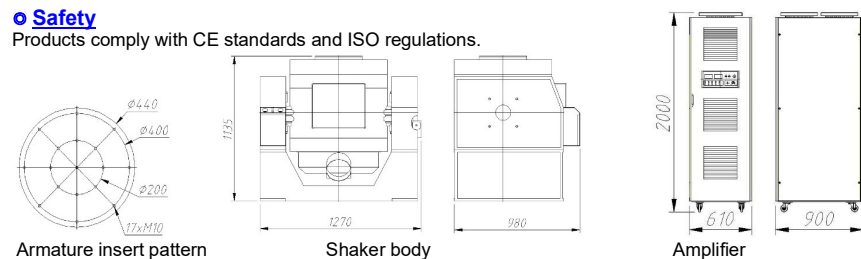
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



S301LS4-440M/SPA403A/ACU153 TECHNICAL SPECIFICATIONS

Shaker Specifications		S301LS4-440M	
Sine (Pk)	3,800 kgf	Vertical Load Support	500 kg
Random (RMS)	3,800 kgf	Table Diameter	440 mm
Shock (Pk)	7,600 kgf	Load Attachment	
Usable Frequency	5 to 3,000 Hz	Points (Standard)	17 stainless steel M10 Inserts
Maximum Displacement (p-p)	100mm intermittence 90mm continuous	Degauss Coil	Standard
Maximum Velocity	2.0 m/s	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Acceleration	110 g	Overall Dimensions	1270mmL×980mmD×1135mm H
Fundamental Resonance Frequency (Bare table)	2,500 Hz (nom.) +/- 5%	Weight of Shaker (Uncrated)	2,500 kg
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz	Compressed Air Requirement	0.69 Mpa
Armature Effective Nominal Weight	35 kg Magnesium alloy		

Power Amplifier Specifications		SPA403A	
Rated Output Capacity		40 kVA	
Signal to Noise Ratio		Greater than 65 dB	
Amplifier Efficiency		Greater than 90%	
Amplifier weight		520 kg	
Standard cable length from shaker to amplifier		6 meters	
Interlock Protection(to prevent the output devices from working outside their specified limits)		●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp	

Blower Specifications		ACU153	
Blower Power (Full Load)		15 kW	
Air Flow Rate		Air Flow: 1.1m ³ /s, Air Pressure: 7.7 kPa	
Air duct length (max stretched)		4500 mm	
Blower size and weight		1050L×897D×1970H mm, 320kg.	

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, exclusive blower motor which draws power separately from site distributor	380/415/480 VAC, 50 Hz, 3Ph, 56kVA+20kVA (for blower), (60 Hz as an option).

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S301LS4-440M/SPA403A/ACU153 a reliable and affordable system for your applications.

Model: S501LS4-445/SPA503A/ACU153

Typical System Application

The **Model S501LS4-445 SPA503A** Vibration Test System is a versatile wide frequency band electrodynamic vibration test system. The feature of the long stroke of 4 inches was designed to meet today's demanding high displacement random and shock test requirements with small to medium sized specimen such as use in the automotive, aerospace, defence, electronic and electrical machinery production sectors. Such kind of shakers can do some tests which need hydraulic shaker or shock machine. The long stroke series increases the spectrum of your lab's testing capability without requiring extra area and cost. The shaker systems all comply with ISO-5344. Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to ensure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

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Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S501LS4-445 shaker and SPA503A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU153 as below specification.

Air-Isolated Rotating Trunnion

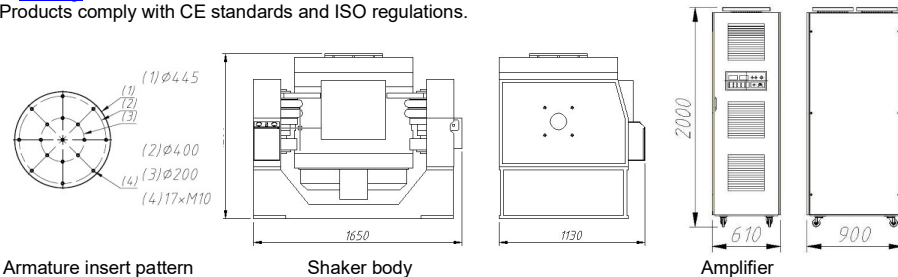
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



Armature insert pattern

Shaker body

Amplifier

S501LS4-445/SPA503A/ACU153 TECHNICAL SPECIFICATIONS

Shaker Specifications S501LS4-445			
Sine (Pk)	5,000 kgf	Vertical Load Support	500 kg
Random (RMS)	5,000 kgf	Table Diameter	445 mm
Shock (Pk)	10,000 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 2,500 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	100mm intermittence 90mm continuous	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2 m/s	Overall Dimensions	1650mmL×1130mmD×1280mmH
Maximum Acceleration	83 g	Weight of Shaker (Uncrated)	4,500 kg
Fundamental Resonance Frequency (Bare table)	2,100 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz		
Armature Effective Nominal Weight	60 kg		

Power Amplifier Specifications SPA503A	
Rated Output Capacity	50 kVA
Signal to Noise Ratio	Greater than 65 dB
Amplifier Efficiency	Greater than 90%
Amplifier weight	560 kg
Standard cable length from shaker to amplifier	6 meters
Interlock Protection (to prevent the output devices from working outside their specified limits)	●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Blower Specifications ACU153	
Blower Power (Full Load)	15 kW
Air Flow Rate	Air Flow: 1.1m ³ /s, Air Pressure: 7.7 kPa
Air duct length (max stretched)	4500 mm
Blower size and weight	1050L×897D×1970H mm, 320kg.

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, exclusive blower motor which draws power separately from site distributor	380/415/480 VAC, 50 Hz, 3Ph, 75kVA+20kVA (for blower), (60 Hz as an option).

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S501LS4-445/SPA503A/ACU153 a reliable and affordable system for your applications.

Model: S501LS4-445M/SPA503A/ACU153

Typical System Application

The **Model S501LS4-445M/SPA503A** Vibration Test System is a versatile wide frequency band electro-dynamics vibration test system. The feature of the long stroke of 4 inches was designed to meet today's demanding high displacement random and shock test requirements with small to medium sized specimen such as use in the automotive, aerospace, defence, electronic and electrical machinery production sectors. Such kind of shakers can do some tests which need hydraulic shaker or shock machine. The long stroke series increases the spectrum of your lab's testing capability without requiring extra area and cost. The shaker systems comply with ISO-5344.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air-cooled unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to insure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S501LS4-445M shaker and SPA503A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU153 as below specification.

Air-Isolated Rotating Trunnion

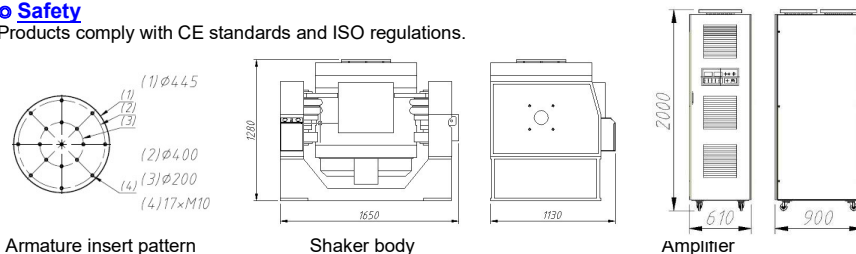
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



S501LS4-445M/SPA503A/ACU153 TECHNICAL SPECIFICATIONS

Shaker Specifications		S501LS4-445M	
Sine (Pk)	5,000 kgf	Vertical Load Support	500 kg
Random (RMS)	5,000 kgf	Table Diameter	445 mm
Shock (Pk)	10,000 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 2,300 Hz	Degauss Coil	Standard
Maximum Displacement (p-p) Electric limitation	100mm intermittence 90mm continuous	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2.0 m/s	Overall Dimensions	1650mmL×1130mmD×1280mmH
Maximum Acceleration	100 g		
Fundamental Resonance Frequency (Bare table)	1,900 Hz (nom.) +/- 5%	Weight of Shaker (Uncrated)	4,500 kg
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz	Compressed Air Requirement	0.69 Mpa
Armature Effective Nominal Weight	50 kg Magnesium alloy		

Power Amplifier Specifications		SPA503A	
Rated Output Capacity		50 kVA	
Signal to Noise Ratio		Greater than 65 dB	
Amplifier Efficiency		Greater than 90%	
Amplifier weight		560 kg	
Standard cable length from shaker to amplifier		6 meters	
Interlock Protection (to prevent the output devices from working outside their specified limits)		●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp	

Blower Specifications		ACU153	
Blower Power (Full Load)		15 kW	
Air Flow Rate		Air Flow: 1.1m ³ /s, Air Pressure: 7.7 kPa	
Air duct length (max stretched)		4500 mm	
Blower size and weight		1050L×897D×1970H mm, 320kg.	

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, exclusive blower motor which draws power separately from site distributor	380/415/480 VAC, 50 Hz, 3Ph, 75kVA+20kVA (for blower), (60 Hz as an option).

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S501LS4-445M/SPA503A/ACU153 a reliable and affordable system for your applications.

Model: S502-445/SPA503A/ACU153

Typical System Application

The **Model S502-445 SPA503A** Series Vibration test system is a versatile wide frequency band electro-dynamics vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too.

The model is capable of a **Random RMS force of 5000 kgf and Sine Vector force rating of 5000 kgf** in the frequency of 5 Hz to 2,800 Hz under controlled conditions. The system consists of a model S502-445 shaker and is driven by the Model SPA503A power amplifier and a 15 KW cooling blower.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip table, head expander, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to ensure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

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Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S502-445 shaker and SPA503A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU153 as below specification.

Air-Isolated Rotating Trunnion

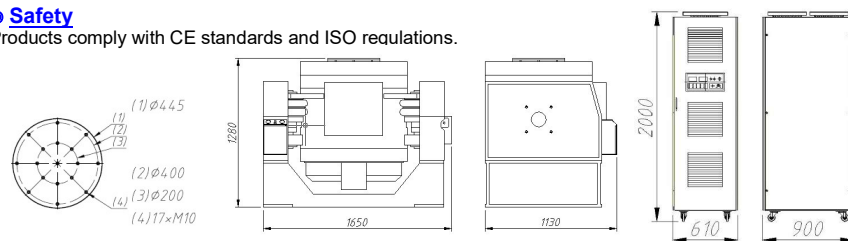
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



Armature insert pattern

Shaker body

Amplifier

S502-445/SPA503A/ACU153 TECHNICAL SPECIFICATIONS

Shaker Specifications S502-445	
Sine (Pk)	5,000 kgf
Random (RMS)	5,000 kgf
Shock (Pk)	10,000 kgf
Usable Frequency	5 to 2,800 Hz
Maximum Displacement (p-p)	51mm
Maximum Velocity	2 m/s
Maximum Acceleration	100 g
Fundamental Resonance Frequency (Bare table)	2,400 Hz (nom.) +/- 5%
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz
Armature Effective Nominal Weight	50 kg
Vertical Load Support	1000 kg, optional 2000kg.
Table Diameter	445 mm
Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Degauss Coil	Standard
Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Overall Dimensions	1650mmL×1130mmD×1280mmH
Weight of Shaker (Uncrated)	4,500 kg
Compressed Air Requirement	0.69 Mpa

Power Amplifier Specifications SPA503A	
Rated Output Capacity	50 kVA
Signal to Noise Ratio	Greater than 65 dB
Amplifier Efficiency	Greater than 90%
Amplifier weight	560 kg
Standard cable length from shaker to amplifier	6 meters
Interlock Protection (to prevent the output devices from working outside their specified limits)	●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Blower Specifications ACU153	
Blower Power (Full Load)	15 kW
Air Flow Rate	Air Flow: 1.1m ³ /s, Air Pressure: 7.7 kPa
Air duct length (max stretched)	4500 mm
Blower size and weight	1050L×897D×1970H mm, 320kg.

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, exclusive blower motor which draws power separately from site distributor	380/415/480 VAC, 50 Hz, 3Ph, 75kVA+20kVA (for blower), (60 Hz as an option).

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S502-445/SPA503A/ACU153 a reliable and affordable system for your applications.

Model: S502-445M/SPA503A/ACU153

Typical System Application

The **Model S502-445M SPA503A** Series Vibration test system is a versatile wide frequency band electro-dynamics vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too.

The model is capable of a **Random RMS force of 5000 kgf and Sine Vector force rating of 5000 kgf** in the frequency of 5 Hz to 2,600 Hz under controlled conditions. The system consists of a model S502-445M shaker and is driven by the Model SPA503A power amplifier and a 15 KW cooling blower.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip table, head expander, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to ensure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

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Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S502-445M shaker and SPA503A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU153 as below specification.

Air-Isolated Rotating Trunnion

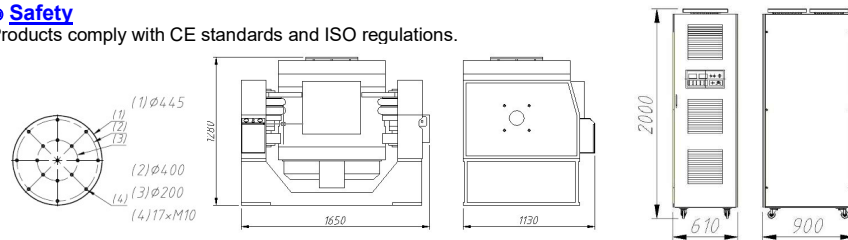
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



Armature insert pattern

Shaker body

Amplifier

S502-445M/SPA503A/ACU153 TECHNICAL SPECIFICATIONS

Shaker Specifications		S502-445M	
Sine (Pk)	5,000 kgf	Vertical Load Support	1000 kg, optional 2000kg.
Random (RMS)	5,000 kgf	Table Diameter	445 mm
Shock (Pk)	10,000 kgf	Load Attachment	17 stainless steel M10 Inserts
Usable Frequency	5 to 2,600 Hz	Points (Standard)	
Maximum Displacement (p-p)	51mm	Degauss Coil	Standard
Maximum Velocity	2 m/s	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Acceleration	100 g	Overall Dimensions	1650mmL×1130mmD×1280 mmH
Fundamental Resonance Frequency (Bare table)	2,100 Hz (nom.) +/- 5%	Weight of Shaker (Uncrated)	4,500 kg
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz	Compressed Air Requirement	0.69 Mpa
Armature Effective Nominal Weight	43 kg Magnesium alloy		

Power Amplifier Specifications		SPA503A	
Rated Output Capacity		50 kVA	
Signal to Noise Ratio		Greater than 65 dB	
Amplifier Efficiency		Greater than 90%	
Amplifier weight		560 kg	
Standard cable length from shaker to amplifier		6 meters	
Interlock Protection (to prevent the output devices from working outside their specified limits)		●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp	

Blower Specifications		ACU153	
Blower Power (Full Load)		15 kW	
Air Flow Rate		Air Flow: 1.1m ³ /s, Air Pressure: 7.7 kPa	
Air duct length (max stretched)		4500 mm	
Blower size and weight		1050L×897D×1970H mm, 320kg.	

System Environmental Requirement			
Operating Room Temperature		0 to 40 degree C	
Humidity		0 to 85%, non condensing	
Amplifier Power Requirement, exclusive blower motor which draws power separately from site distributor		380/415/480 VAC, 50 Hz, 3Ph, 75kVA+20kVA (for blower), (60 Hz as an option).	

SYSTEM OPTIONS			
●Slip Table Configuration		●Thermal Barrier	
●V-Groove Caster and Rail System		●Load Support Air Compensator	
●Table Inserts		●Air Caster	
●Head Expander		●Remote control hard ware and soft ware	

All the features make the S502-445M/SPA503A/ACU153 a reliable and affordable system for your applications.

Model: S502-445M/SPA503A/ACU153

Typical System Application

The **Model S502-445M SPA503A** Series Vibration test system is a versatile wide frequency band electro-dynamics vibration test system. It is designed to test from small to medium sized payload such as electronic assemblies and design features meet the testing requirements of the automotive, aviation, military, medical and electronic manufacturing industries, too.

The model is capable of a **Random RMS force of 5000 kgf and Sine Vector force rating of 5000 kgf** in the frequency of 5 Hz to 2,600 Hz under controlled conditions. The system consists of a model S502-445M shaker and is driven by the Model SPA503A power amplifier and a 15 KW cooling blower.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip table, head expander, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to ensure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

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Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S502-445M shaker and SPA503A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU153 as below specification.

Air-Isolated Rotating Trunnion

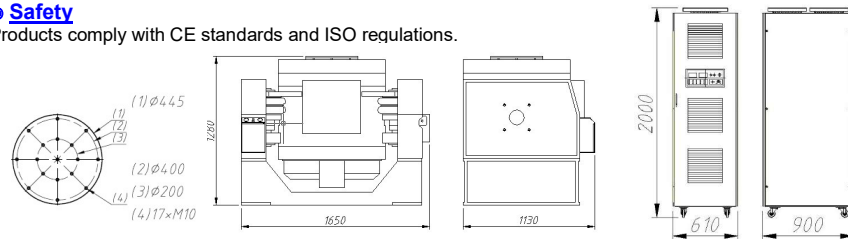
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D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



Armature insert pattern

Shaker body

Amplifier

S502-445M/SPA503A/ACU153 TECHNICAL SPECIFICATIONS

Shaker Specifications S502-445M			
Sine (Pk)	5,000 kgf	Vertical Load Support	1000 kg, optional 2000kg.
Random (RMS)	5,000 kgf	Table Diameter	445 mm
Shock (Pk)	10,000 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 2,600 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	51mm	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2 m/s	Overall Dimensions	1650mmL×1130mmD×1280 mmH
Maximum Acceleration	100 g	Weight of Shaker (Uncrated)	4,500 kg
Fundamental Resonance Frequency (Bare table)	2,100 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz		
Armature Effective Nominal Weight	43 kg Magnesium alloy		

Power Amplifier Specifications SPA503A	
Rated Output Capacity	50 kVA
Signal to Noise Ratio	Greater than 65 dB
Amplifier Efficiency	Greater than 90%
Amplifier weight	560 kg
Standard cable length from shaker to amplifier	6 meters
Interlock Protection (to prevent the output devices from working outside their specified limits)	●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Blower Specifications ACU153	
Blower Power (Full Load)	15 kW
Air Flow Rate	Air Flow: 1.1m ³ /s, Air Pressure: 7.7 kPa
Air duct length (max stretched)	4500 mm
Blower size and weight	1050L×897D×1970H mm, 320kg.

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, exclusive blower motor which draws power separately from site distributor	380/415/480 VAC, 50 Hz, 3Ph, 75kVA+20kVA (for blower), (60 Hz as an option).

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S502-445M/SPA503A/ACU153 a reliable and affordable system for your applications.

Model: S502LS3-445/SPA503A/ACU153

Typical System Application

The **Model S502LS3-445/SPA503A** Vibration Test System is a versatile wide frequency band electro-dynamics vibration test system. The feature of the long stroke of 3 inches was designed to meet today's demanding high displacement random and shock test requirements with small to medium sized specimen such as use in the automotive, aerospace, defence, electronic and electrical machinery production sectors. Such kind of shakers can do some tests which need hydraulic shaker or shock machine. The long stroke series increases the spectrum of your lab's testing capability without requiring extra area and cost. The shaker systems all comply with ISO-5344.

Standard vibration systems consist of an electro-dynamic exciter (the "shaker"), a state-of-the-art air-cooled switching power amplifier with field power supply and an air cooling unit. Optional items including slip tables, head expanders, accelerometers and vibration controller can be added upon request.

How to select the suitable model

It is critical to consider the size and position of the test article and the total moving mass of the payload as well as the payload's inertial and overturning moments when selecting a system for your application. It is recommended the force selected should be 1.2 times the theoretical value, to ensure appropriate safety margins. For assistance selecting the best system for your needs, please contact our sales representative.

High FRF & Wide UF

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Reliable Armature

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Efficient Air Cooling

S502LS3-445 shaker and SPA503A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU153 as below specification.

Air-Isolated Rotating Trunnion

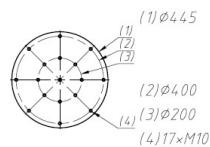
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D-Class Switching Amplifier

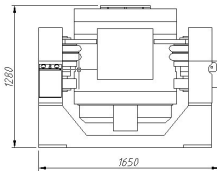
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Safety

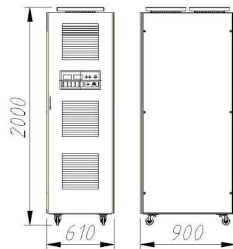
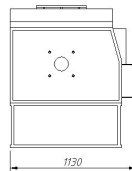
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Armature insert pattern



Shaker body



Amplifier

S502LS3-445/SPA503A/ACU153 TECHNICAL SPECIFICATIONS

Shaker Specifications S502LS3-445			
Sine (Pk)	5,000 kgf	Vertical Load Support	1000 kg, optional 2000kg.
Random (RMS)	5,000 kgf	Table Diameter	445 mm
Shock (Pk)	10,000 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 2,700 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	76mm intermittence 63mm continuous	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2 m/s	Overall Dimensions	1650mmL×1130mmD×1280mmH
Maximum Acceleration	90 g	Weight of Shaker (Uncrated)	4,500 kg
Fundamental Resonance Frequency (Bare table)	2,300 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz		
Armature Effective Nominal Weight	55 kg		

Power Amplifier Specifications SPA503A	
Rated Output Capacity	50 kVA
Signal to Noise Ratio	Greater than 65 dB
Amplifier Efficiency	Greater than 90%
Amplifier weight	560 kg
Standard cable length from shaker to amplifier	6 meters
Interlock Protection (to prevent the output devices from working outside their specified limits)	●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp

Blower Specifications ACU153	
Blower Power (Full Load)	15 kW
Air Flow Rate	Air Flow: 1.1m ³ /s, Air Pressure: 7.7 kPa
Air duct length (max stretched)	4500 mm
Blower size and weight	1050L×897D×1970H mm, 320kg.

System Environmental Requirement	
Operating Room Temperature	0 to 40 degree C
Humidity	0 to 85%, non condensing
Amplifier Power Requirement, exclusive blower motor which draws power separately from site distributor	380/415/480 VAC, 50 Hz, 3Ph, 75kVA+20kVA (for blower), (60 Hz as an option).

SYSTEM OPTIONS	
●Slip Table Configuration ●V-Groove Caster and Rail System ●Table Inserts ●Head Expander	●Thermal Barrier ●Load Support Air Compensator ●Air Caster ●Remote control hard ware and soft ware

All the features make the S502LS3-445/SPA503A/ACU153 a reliable and affordable system for your applications.

Model: S502LS3-445M/SPA503A/ACU153

Typical System Application

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Our new shaker design significantly raises the FRF (Fundamental Resonance Frequency) and UF (Useable Frequency) of our long stroke systems and outperforms similar products from other manufacturers.

Reliable Armature

The unique reinforced armature structure design is state-of-the-art, providing increased reliability and unsurpassed performance. Our proprietary armature structure has been re-designed to optimize its rigidity and force transmissibility. Designed for continuous duty and ideal for research & development, production, stress screening and qualification testing, our ruggedized armatures can endure severe vibration and shock forces and extreme temperature conditions.

Efficient Air Cooling

S502LS3-445M shaker and SPA503A power amplifier are air cooled for easy installation and economical operation.

Cooling Blower Unit

The suitable Cooling blower is ACU153 as below specification.

Air-Isolated Rotating Trunnion

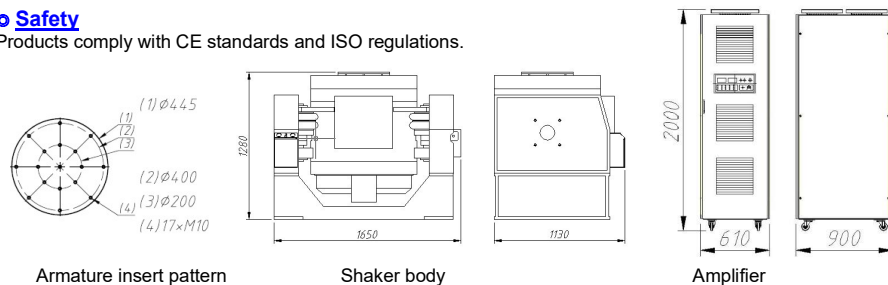
All shakers come standard in a rotating trunnion for easy 90° rotation between the horizontal and vertical test axes. A labor-saving worm wheel is designed for this rotation, which make it friendly for both men and women. Trunnion is pneumatically isolated providing high stability and allowing for direct mounting onto conventional industrial concrete floors. All shakers are optionally available with an integrated or stand-alone slip table assembly.

D-Class Switching Amplifier

Our state-of-art modular switching amplifiers are 100% air-cooled with redundant safety systems and system interlocks insuring performance that is reliable and stable. All amplifiers adopt IGBT power modules of high quality.

Safety

Products comply with CE standards and ISO regulations.



S502LS3-445M/SPA503A/ACU153 TECHNICAL SPECIFICATIONS

Shaker Specifications		S502LS3-445M	
Sine (Pk)	5,000 kgf	Vertical Load Support	1000 kg, optional 2000kg.
Random (RMS)	5,000 kgf	Table Diameter	445 mm
Shock (Pk)	10,000 kgf	Load Attachment Points (Standard)	17 stainless steel M10 Inserts
Usable Frequency	5 to 2,500 Hz	Degauss Coil	Standard
Maximum Displacement (p-p)	76mm intermittence 63mm continuous	Stray Flux Density @6 inch (152 mm) above insert	< 1 mT (10 gauss)
Maximum Velocity	2 m/s	Overall Dimensions	1650mmL×1130mmD×1280mmH
Maximum Acceleration	110 g	Weight of Shaker (Uncrated)	4,500 kg
Fundamental Resonance Frequency (Bare table)	2,100 Hz (nom.) +/- 5%	Compressed Air Requirement	0.69 Mpa
Body Suspension Natural Frequency (Thrust Axis)	Less than 2.5 Hz		
Armature Effective Nominal Weight	45 kg Magnesium alloy		

Power Amplifier Specifications		SPA503A	
Rated Output Capacity		50 kVA	
Signal to Noise Ratio		Greater than 65 dB	
Amplifier Efficiency		Greater than 90%	
Amplifier weight		560 kg	
Standard cable length from shaker to amplifier		6 meters	
Interlock Protection (to prevent the output devices from working outside their specified limits)		●Input Over/Under Voltage ●Logic Fault ●Output Over Voltage/Current ●Control Power ●External ●Slip table Oil Pressure ●Module O/T ●Door Interlock ●Shaker Temp	

Blower Specifications		ACU153	
Blower Power (Full Load)		15 kW	
Air Flow Rate		Air Flow: 1.1m ³ /s, Air Pressure: 7.7 kPa	
Air duct length (max stretched)		4500 mm	
Blower size and weight		1050L×897D×1970H mm, 320kg.	

System Environmental Requirement			
Operating Room Temperature		0 to 40 degree C	
Humidity		0 to 85%, non condensing	
Amplifier Power Requirement, exclusive blower motor which draws power separately from site distributor		380/415/480 VAC, 50 Hz, 3Ph, 75kVA+20kVA (for blower), (60 Hz as an option).	

SYSTEM OPTIONS			
●Slip Table Configuration		●Thermal Barrier	
●V-Groove Caster and Rail System		●Load Support Air Compensator	
●Table Inserts		●Air Caster	
●Head Expander		●Remote control hard ware and soft ware	

All the features make the S502LS3-445M/SPA503A/ACU153 a reliable and affordable system for your applications.

F500-120M SPA601 Shaker System

Typical Application: The F500-120M is a light-weight shaker with cost-effective. The output force is 500N. With a 20 mm stroke and useable frequency range up to 10000 Hz, this shaker system is suitable for vibration test applications including accelerometer calibration, modal and structural analysis, separation of powders, and small component vibration screening. The small electrodynamic shaker is typically part of the vibration test equipment used in educational, research and laboratory environments.



Advantages: The shaker is supported by its trunnion frame and can be switched between vertical and horizontal directions. The rubber pads supplied with the shaker will isolate most of the vibration to the floor.

The inner integrated axial cooling fan is set at the bottom of the shaker, which is the unique design of this small shaker. There is no need of independent blower for cooling the shaker, at the same time the blower noise is reduced.

The optimized armature has a natural frequency up to 7100 Hz. It greatly increases the useable frequency range and improves performance.

Model Specification	Electrodynamic Shaker
	F500-120M
Sine Force (Pk)	500 N
Random Force (RMS)	350 N
Shock Force (Pk)	1,000 N
Useable Frequency	5~10000 Hz
Maximum Displacement (p-p)	20 mm
Maximum Velocity	1.2 m/s
Maximum Acceleration	30 g
Vertical Load Support	20 kg
Armature Effective Nominal Weight	1.7 kg
Electromechanical Parameters (Data table)	
Armature Table Diameter	120 mm
Armature insert pattern sized M6	One at center and 6 each at the 90mm BCD
Stray Field @ 6 inch (152 mm) above insert	< 1 mT (10 gauss)
Weight of Shaker (Uncrated)	95 kg
Overall Dimension of shaker	
Power Amplifier (Linear) Signal to Noise Ratio	SPA601, Greater than 70 dB
Overall Dimension of amplifier	480mmL×470 mmD×132 mmH
Weight of amplifier	20 kg
Cooling Type	Air Cooling by internal axial fan
Power Supply Requirement	AC 220V±10%, 50/60Hz, Single Phase, 1.3kVA
Environment Requirements	Temperature: 0~40°C
	Relative Humidity: 0~80%, non-condensing

Model: P050 PA200



P050 Modal Shaker



Package contents

Typical Application

The P050 is a new, lightweight, permanent magnet shaker. The unit can provide a max Sine vector force rating of 50N with inside cooling fan. P050 modal thruster system includes a Model P050 shaker, driven by the Model PA200 power amplifier. With a 16mm p-p stroke and useable frequency range up to 12000 Hz, it is suitable for vibration test applications including modal and structural analysis. The small electrodynamic shaker is typically part of the vibration test equipment used in educational, research and laboratory environments.

Advantages:

- The shaker is supported by trunnion frame and can be switched between vertical and horizontal directions.
- It is Built-in air cooled.
- The optimized armature has a natural frequency above 10000 Hz. It greatly increases the useable frequency range and improves performances.

Specification Table

P050 Modal Shaker	
Sine (Pk) and Random (rms)	50 N
Usable Frequency	5-12000 Hz
Fundamental Resonance Frequency (Nominal)	10000 Hz (nom.) +/- 5%
Maximum displacement (Peak-Peak)	16 mm
Maximum Velocity	1.2 m/s
Maximum Acceleration	40 g
Effective Nominal Armature Mass	0.13 kg
Stinger thread interface	M6
Weight	4 kg
Overall Dimension	183 mmL×110 mmD×167 mmH
Cooling Type	Built-in blower
Elastic stinger size	M6- ϕ 2-M5 (or optional 1/4-28 and 10-32)
Internal connecting cable length	2.0 meters
Power cable length	2x1.5 meters
BNC signal cable length	2.0 meters
PA200 Power Amplifier	
Rated Output Capacity	200 VA
Frequency Response	DC-20000Hz
Max output voltage	30 V
Max output current	7 A
Input Signal Voltage	<3 V rms
Signal to Noise Ratio	≥ 90 dB
THD	<0.5 % typically
Protection interlock	Over current, Over voltage, Over temp.
Power Supply Requirement	220-240ACV, 50/60Hz, 1 Phase, 240VA
Weight	1.2 kg
Overall Dimension	160L×75W×50H mm
Environment Requirements	Temperature: 0~40°C. Relative Humidity: 0~80%, non-condensing

All the features make the P050 PA200 a reliable and affordable system for your applications.

Model: P050T PA200



P050T Modal Shaker

Package contents

Typical Application

The P050T (T means with armature Table) is a new, lightweight, permanent magnet shaker. The unit can provide a max Sine vector force rating of 50N with inside cooling fan. The P050T system includes a Model P050T shaker (for dual use of armature table and thruster stinger), driven by the Model PA200 power amplifier. With a 10mm p-p stroke and usable frequency range up to 10000Hz, it is suitable for vibration test applications including modal and structural analysis, separation of powders, and small component vibration screening. The small electrodynamic shaker is typically part of the vibration test equipment used in educational, research and laboratory environments.

Advantages:

- The shaker is supported by trunnion frame and can be switched between vertical and horizontal directions.
- It is Built-in air cooled.
- The optimized armature has a natural frequency above 9500 Hz. It greatly increases the useable frequency range and improves performance.

Specification Table

P050T Shaker	
Sine (Pk) and Random (rms)	50 N
Usable Frequency	5-10000 Hz
Fundamental Resonance Frequency (Nominal, Bare Table)	9500 Hz (nom.) +/- 5%
Maximum displacement (Peak-Peak)	10 mm
Maximum Velocity	1.2 m/s
Maximum Acceleration	20 g
Effective Nominal Armature Mass	0.25 kg
Max load on armature	2 kg
Armature table diameter	30 mm
Stinger thread interface	M6 at center
Armature table insert pattern	4xM5 @ Ø20
Weight	4 kg
Overall Dimension	183 mmL×110 mmD×162 mmH
Cooling Type	Built-in blower
Elastic stinger size	M6- φ 2-M5 (or optional 1/4-28 and 10-32)
Internal connecting cable length	2.0 meters
Power cable length	2x1.5 meters
BNC signal cable length	2.0 meters
PA200 Power Amplifier	
Rated Output Capacity	200 VA
Frequency Response	DC-20000Hz
Max output voltage	30 V
Max output current	7 A
Input Signal Voltage	<3 V rms
Signal to Noise Ratio	≥90 dB
THD	<0.5 % typically
Protection interlock	Over current, Over voltage, Over temp.
Power Supply Requirement	220-240ACV, 50/60Hz, 1 Phase, 240VA
Weight	1.2 kg
Overall Dimension	160L×75W×50H mm
Environmental Requirements	Temperature: 0~40°C. Relative Humidity: 0~80%, non-condensing

All the features make the P050T PA200 a reliable and affordable system for your applications.

NOTE: In keeping with our commitment to continuous product improvement, the information herein is subject to change.

Model:P500T SPA112B ACU401



P500T Shaker



SPA112B Amplifier



Blower ACU401

Typical Application

The P500T is a lightweight, permanent magnet modal shaker with table (stinger is an option) output force. The unit is capable of providing 50kgf Sine force. With a 15mm p-p stroke and useable frequency range up to 5000 Hz, it is suitable for modal and structural analysis. The modal shaker is typically part of the vibration test equipment used in educational, research and laboratory environments.

Advantages:

- The shaker is supported by trunnion frame and can be switched between vertical and horizontal directions.
- If output force is lower than half of the rated one, the blower is unnecessary because the heat will be dispatched through the shaker body, which is the unique design of our small shakers. Cooling-blower is necessary when the output force is higher than half of the rated one.
- The optimized armature has a natural frequency up to 3500 Hz. It greatly increases the useable frequency range and improves performance.

P500T SPA112B ACU401 TECHNICAL SPECIFICATIONS			
Modal Shaker Specifications P500T			
Sine (Peak) force*	50kgf	Max. Strike (p-p)	15mm
Random (rms) force*	35kgf	Max. Velocity	1.6 m/s
Shock (Peak) force*	Limited by displacement and velocity	Max. Acceleration	80 g
Usable Frequency	5 to 5,000 Hz	Table Interface	Ø50, 5×M6 @ center & Ø35. Optional stinger: Each M6-φ2-M5 and M6-φ3-M5 (For the end of M5, optional 1/4-28 or 10-32 based on your senser's bolts)
Fundamental Resonance Frequency (Bare table)	3,500 Hz (nom.) +/- 5%	Armature Effective Nominal Weight	0.63 kg
Body Suspension Natural Frequency (Thrust Axis)	Rigid trunnion	Weight (Uncrated)	15 kg
Vertical Load Support	4 kg	Overall Size mm	260L×190D×240H
Switching Power Amplifier Specifications SPA112B			
Rated Output Capacity		1.1KVA	
Frequency range		DC-20000 Hz	
Max output Voltage		110 V	
Max output Current		10 A	
Max Signal Input Voltage		3 V	
Signal to Noise Ratio		Greater than 90 dB	
THD		Better than 0.5% typically	
Size		250x320x160 mm	
Weight		7 kg	
Interlock Protection		●Shaker Over Travel ●Shaker Over Temp ●Output Over Voltage ●Output Over Current	
Air Cooling Blower ACU401			
Blower Power (Full Load)		0.40 kW	
Size		246x247x256 mm	
Weight		10 kg	
System Environmental Requirement			
Operating Room Temperature and Humidity		0 to 40 degree C. 0 to 90%, non-condensing	
Single phase, Neutral and Ground is required.		Total 1.2kVA, not including 0.4 kVA of the blower supply.	
220VAC (50/60 Hz) and 115VAC (50/60 Hz) available.			

* The output force will be reduced to half of the rated one if the air blower is not used.

All the features make the P500T SPA112B ACU401 a reliable and affordable system for your applications.

NOTE: In keeping with our commitment to continuous product improvement, the information herein is subject to change.

Model: P1000 SPA152B ACU751



P1000T Shaker



SPA152B Amplifier



Blower ACU751

Typical Application

The P1000 is a light-weight, permanent magnet modal shaker with stinger output force. The unit is capable of providing 100kgf force. With a 20mm stroke and useable frequency range up to 4500 Hz, it is suitable for modal and structural analysis. The modal shaker is typically part of the vibration test equipment used in educational, research and laboratory environments.

Advantages:

- The shaker is supported by trunnion frame and can be switched between vertical and horizontal directions.
- If output force is lower than half of the rated one, the blower is unnecessary because the heat will be dispatched through the shaker body, which is the unique design of our small shakers. Cooling-blower is necessary when the output force is higher than half of the rated one.
- The optimized armature has a natural frequency up to 3900 Hz. It greatly increases the useable frequency range and improves performance.

P1000 SPA152B ACU751 TECHNICAL SPECIFICATIONS			
Modal Shaker Specifications P1000			
Sine (Peak) force*	100kgf	Max. Strike (p-p)	20mm
Random (rms) force*	70kgf	Max. Velocity	1.6 m/s
Shock (Peak) force*	Limited by displacement and velocity	Max. Acceleration	100 g
Usable Frequency	DC to 4,500 Hz	Stinger Interface	Each M6- ϕ 2-M5 and M6- ϕ 3-M5 (For the end of M5, optional 1/4-28 or 10-32 based on your sensor's bolts)
Fundamental Resonance Frequency (Bare table)	3,900 Hz (nom.) +/- 5%	Armature Effective Nominal Weight	1.0 kg
Body Suspension Natural Frequency (Thrust Axis)	Rigid trunnion	Weight (Uncrated)	41 kg
Vertical Load Support	N/A, by using stinger	Overall Size mm	343L×267D×347H
Switching Power Amplifier Specifications SPA152B			
Rated Output Capacity	1.5KVA		
Frequency range	DC-20000 Hz		
Max output Voltage	110 V		
Max output Current	15 A		
Max Signal Input Voltage	3 V		
Signal to Noise Ratio	Greater than 90 dB		
THD	Better than 0.5% typically		
Size	480x483x132 mm		
Weight	14kg		
Interlock Protection	●Shaker Over Travel ●Shaker Over Temp ●Output Over Voltage ●Output Over Current		
Air Cooling Blower ACU751			
Blower Power (Full Load)	0.75 kW		
Size	286x302x294 mm		
Weight	13kg		
System Environmental Requirement			
Operating Room Temperature and Humidity	0 to 40 degree C. 0 to 90%, non-condensing		
Single phase, Neutral and Ground is required. 230VAC (50/60 Hz) and 115VAC (50/60 Hz) available.	Total 2.6kVA, including 0.75 kVA of the blower drawing power from amplifier.		

* The output force will be reduced to half of the rated one if the air blower is not used.

All the features make the P1000 SPA152B ACU751 a reliable and affordable system for your applications.