



电磁式振动试验系统

ELECTROMAGNETIC VIBRATION TESTING SYSTEM

www.king-design.com.cn

金顿科技股份有限公司
金顿仪器科技（昆山）有限公司

电磁式振动试验设备

ELECTROMAGNETIC VIBRATION TESTING SYSTEM

帮助了解各类物品、结构、装置处于振动环境下所反映出来的情形，避免长时间处于共振状态下造成无法预知的损坏，能充分显现持续性与疲劳性的试验，藉由振动实验了解相关结构间之相互影响。

不同状态之振动产生，造成不同程度的损坏，对于环境所发生的振动是难以避免的。振动试验机可用于实验室中作一连串可控制的振动仿真，确保产品在寿命周期中，能承受运送或使用的振动考验，符合设计及功能的要求标准。

电磁式振动试验机具有振动响应频率宽、控制精度高、可模拟各种波形及规范、控制容易、扩充性能佳、保养容易等优点。

Help to know the reflected condition of all types of product, structure and device in vibration environment, and avoid unpredictable damage in vibration condition for a long time. The test can fully indicate the continuity and fatigue of the product and be used to find mutual effects of related structure.

Different vibration state could make different level of damage. It's difficult to avoid the vibration on environment. Vibration tester can be used to make a series of controllable vibration simulation, ensure your product can endure the vibration in transit or usage process in the life cycle reaching the required standard of the design and function.

Electromagnetic vibration testing system has such advantages: wide frequency vibration response, high precision control, various waveforms can be simulated, great extensibility, easy operate and maintain.



金顿所提供的振动台有以下优势：

- 推力范围广泛，0.5 ~ 12,000 kgF用户可依需求进行选购。
- 频率响应范围：0.1Hz (DC offset) ~ 20,000 Hz。
- 内部线圈皆采用H⁺等级APTZ线圈，绿能低漏磁本体，搭配超超导磁合金，磁效益最高。
- 特有军规级一体式镁合金铸造动圈，高强度设计，频谱输出平坦，耐久度佳。
- 低漏磁设计，设备上方15 cm漏磁量 < 5 mT，1 m处漏磁几乎为0。
- 动圈特有机构设计，抗偏力矩大，EM系列全机种偏向位移 < 10%。
- 整机结构为低共振设计，提供测试精度与准确度。
- 散热依据热流冷却风路设计，适宜长时间使用，确保系统稳定。
- 业界专有低噪音冷却系统，室内开启噪音 < 68 dB，提高工作环境效率。
- 振动台采用气囊与“长位移”软性油压吸震器双重避震设计，有效避开厂房自然频率，不影响楼板结构（专利独家）。
- 标配无须地槽设计，用户无须进行场地重整，也无须破坏现有场地进行安装，节省大笔花费。
- 变更轴向采专利设计，转轴自动保持中心轴，自动转轴、超高效缓冲避震组。等多项扩充功能可供用户选择。
- 硬件、软件扩充性能高、保养容易、操作简单，行销全球超过30余年。
- 符合IEC、GB、JB/T、GJB、JJG、MIL/STB、GEDEC、ERA、DIN、CNS等各国各行业试验标准。

Feature of King Design as bellow:

- Extensive force range : 0.5-12,000 kgF select according to your need.
- Frequency range: 0.1Hz (DC offset) ~ 20,000 Hz.
- Internal coil adopt H⁺rating APTZ coil, green low leakage magnetic body, generate magnetic effect at full capacity when equipped with ultra-high magnetic alloy.
- The coil (with patent) is made of military level one-magnesium alloy casting, with high-strength design, excellent spectrum output, and good durability.
- With low magnetic flux leakage design, the MFL amount of 15cm upper equipment is less than 10gauss and is almost zero within 1m distance.
- Special coil design, and anti-bias force. The biased displacement of EM series is below 10%.
- The low resonance design is applied in the equipment structure no effect on the testing process. Testing data is precise and accurate.
- The cooling system is designed in accord with the cooling airflow, and suitable for long use, thus it can ensure system stability.
- With the professional low-noise cooling system, Indoor noise is less than 68dB, greatly improve working efficiency.
- Vibration table adopt double absorber design with airbag and "Long Displacement" soft hydraulic shock absorber, effectively avoid plant's natural frequency and do not affect floor structure.
- Wide application for no restricted site, user needn't to reform the site, and no need to damage the existing site for installation, thus save large costs.
- Multiple extended-functions are set for user to choose, such as Automatic alignment, Automatic shaft and Ultra-efficient buffering shock system.
- The equipment (hardware and software) has high expansion capability, easy to maintain and operate. Market abroad for 30 years.
- Comply with IEC, GB, JB/T, GJB, JJG, MIL/STB, GEDEC, ERA, DIN, CNS testing standard.

产品规格 Product Specification

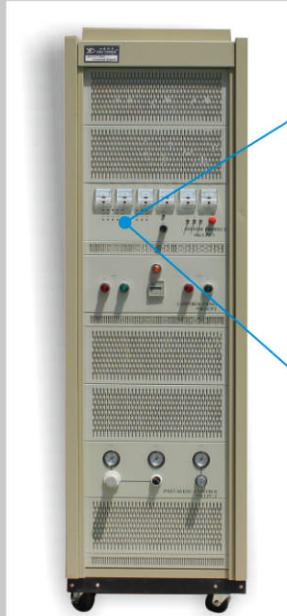
KD-9363	推力值 Force (kgF)	频率范围(Hz) Usable Freq Range	动圈重量(kg) Mass of Armature	动圈直径(mm) Armature Diameter	加速度(g) Sine Peak Acc	位移(mm) Max Disp	载重(kg) Load Support Capacity	冷却方式 Cooling Method
LT-2	2	1 ~ 20,000	0.08	30	25	5	0.5	高压气冷 Gas Cooling
LT-5	5	1 ~ 10,000	0.20	70	25	10	1	
LT-10	10	1 ~ 10,000	0.50	70	20	15	2	
LT-30	30	1 ~ 4,000	1.50	70	20	20	5	风冷 Air Cooling
EM-100	100	1 ~ 4,500	4	90	25	25	70	
EM-200	200	1 ~ 4,000	4	140	50	25	70	
EM-400	400	1 ~ 4,000	9	150	44	40	140	
EM-600	600	1 ~ 4,000	12	200	50	51	300	
EM-1000	1,000	1 ~ 4,000	15	200	67	51	300	
EM-1000-L	1,000	1 ~ 4,000	18	260	56	76	300	
EM-1500	1,500	1 ~ 4,000	20	200	75	51	300	
EM-1500-L	1,500	1 ~ 4,000	25	260	60	76	300	
EM-2000	2,000	1 ~ 4,000	35	330	57	51	300	
EM-2000-L	2,000	1 ~ 4,000	40	330	50	76	300	
EM-3000	3,000	1 ~ 3,000	40	450	75	51	500	
EM-3000-L	3,000	1 ~ 3,000	45	450	67	76	500	
EM-4000	4,000	1 ~ 3,000	60	450	67	51	800	
EM-4000-L	4,000	1 ~ 3,000	65	450	62	76	800	
EM-5000	5,000	1 ~ 3,000	65	450	77	80	800	
EM-6000	6,000	1 ~ 3,000	80	450	75	80	1,000	雾化水气 Atomization Cooling
EM-7000	7,000	1 ~ 2,500	90	650	78	80	1,000	
EM-8000	8,000	1 ~ 2,500	100	650	80	80	1,000	
EM-10000	10,000	1 ~ 2,500	120	650	80	80	1,000	
EM-12000	12,000	1 ~ 2,500	140	650	80	80	1,000	

76 / 80 mm位移機種可依用户需求定制100 / 120 mm以上位移

功放系统与伺服保护器 Amplifier and Servo Protector

全球唯一内部系统具备FIX SINE 20 Hz / SWEEP SINE 10~500 Hz产生器，可作为振动系统之自我检校及测试前对象及夹治具安装适度检查。

The only internal system is provided with generator (FIX SINE 20 Hz / SWEEP SINE 10~500 Hz) in the world, which can be used as self-calibration and moderate examination of fixture before testing.



模拟式保护器具有过位移、过电流、动圈温度保护、功放温度保护、冷却系统异常、紧急停止、功放输出异常等7组指示灯号，直观式输出灯号加速用户排除异常，同时配有6组模拟表头，实时性输出数据有效提高用户掌握设备使用状态。

Analog protection apparatus has 7 groups of indicator, such as over-disp, over-curr, coil temp/Amp temp, cooling fan, emergent, error, Efficacy output exception. Intuitive indicator can accelerate to exclude abnormality, with 6 groups of analog meter, Real-time output data can effectively help user to master the using condition of device.



数字式保护器为显示触摸屏，中文化接口显示整机实时运行状态，操作无须切换画面，避免发生操作误判情况。

Digital protector is Touch Screen Display, and indicates the equipment operation condition. No need to switch the screen, we can avoid operational errors.

放大器 Amplifier

PWM高功率放大器，业界最高98%转换效益，符合国际各种安规认证（Philps-MRI核磁共振仪与美军潜艇指定使用）。

PWM Power efficiency of Copley imported original amplifier is up to 96% conforming to international safety certifications. (Specified by Philips-MRI NMR and US military submarine)



矩形垂直平台 Vertical Square Table

动圈直径 (mm) 产品型号Model	90	140	200 / 260 / 330	450 / 650
V-150	2,000	2,000		适用频率 Usable Freq
	5	5		平台重量 Mass of Table
V-200	2,000	2,000		
	6	6		
V-300	2,000	2,000		
	9	9		
V-450		2,000		
		15		
V-500		2,000	2,000	2,000
		26	9	26
V-600		2,000	2,000	2,000
		54	15	54
V-750			2,000	2,000
			26	76
V-1000			2,000	1,000
			54	220
V-1200			2,000	500
			76	162
V-1500			1,000	400
			220	280
V-1800				300
				440
V-1214				400
				195
V-1418	适用频率 Usable Freq			300
	平台重量 Mass of Table			336

1.适用频率为控制点 ± 3 dB

2.共振频率 / 1.4

3.可依用户需求选购镁合金轻质平台，可减少30%重量

4.除上述尺寸、规格外，可依用户需求订制平台

垂直扩展台 Vertical Expansion Table

- 依据使用范围，提供高频、低频扩展台供用户选择。
- 平台材质依照客户需求提供，除了镁、铝合金外，另有特殊材质平台可供。
- 平台样式皆采用有效元素模态进行设计，可靠度高。
- 铝平台表面皆使用阳极硬化处理，有效延长使用寿命。
- 锁附孔使用高强度、高拉力、耐磨损合金护套，可防止溃牙大大提升平台寿命。
- According to the usage range, there is high-frequency table or low-frequency table for your choice.
- Table material provided as your request, we have magnesium and aluminum and some special material platform to choose.
- Platform adopt finite element analysis with high reliability.
- The appearance of aluminum table use anodized treatment, prolong usage life.
- The insert use alloy steel with high-strength, high-tension, and high anti-wear, avoid the tooth collapse and lengthen the platform lifetime.



圆形垂直平台 Vertical Circular Table

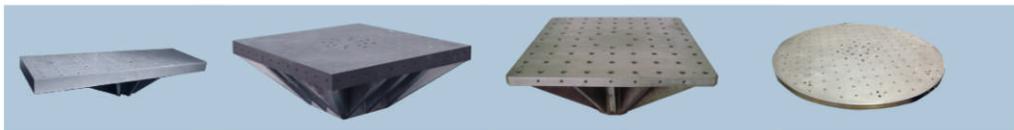
动圈直径 (mm) 产品型号Model	90	140	200 / 260 / 330	450 / 650
CR-150	2,000	2,000		适用频率 Usable Freq
	3	3		平台重量 Mass of Table
CR-200	2,000	2,000		
	4	4		
CR-300	2,000	2,000	2,000	
	5	5	5	
CR-450		2,000	2,000	
		13	13	
CR-500		2,000	2,000	2,000
		42	42	42
CR-600		2,000	2,000	2,000
		74	74	74
CR-750			2,000	2,000
			85	85
CR-1000			1,000	1,000
			140	140
CR-1200				500
				250
CR-1500	适用频率 Usable Freq			400
	平台重量 Mass of Table			280

1. 适用频率为控制点 ± 3 dB

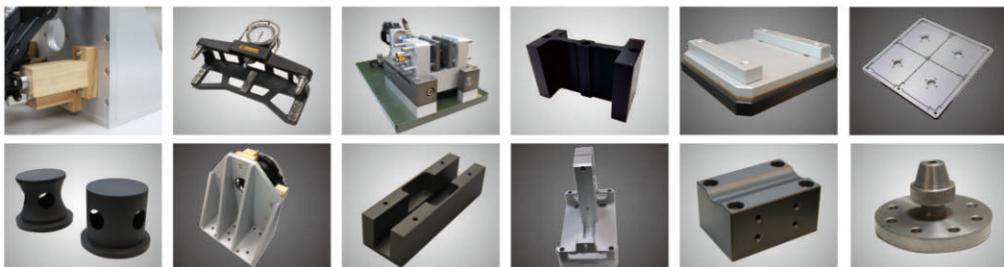
2. 共振频率 / 1.4

3. 可依用户需求选购镁合金轻质平台, 可减少30%重量

4. 除上述尺寸、规格外, 可依用户需求订制平台

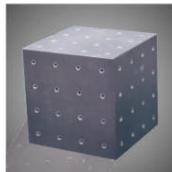


特制夹治具 Special Fixture



立体治具 Cubic Fixture

型号 Model	尺寸(mm) Dimension	上限频率(Hz) Limit Freq	治具重量(kg) Mass of Fixture
JG-100	100 x 100 x 100	2,000	3
JG-150	150 x 150 x 150	2,000	9
JG-200	200 x 200 x 200	2,000	13
JG-250	250 x 250 x 250	1,800	25
JG-300	300 x 300 x 300	1,500	45
JG-350	350 x 350 x 350	1,200	70
JG-450	450 x 450 x 450	1,000	148
JG-500	500 x 500 x 500	800	202
JG-600	600 x 600 x 600	599	350



1. 上限频率为控制点 $\pm 3\text{dB}$
2. 正弦频率 / 1.4
3. 可依用户需求选购镁合金轻质平台, 可减少30%重量
4. 除上述尺寸、规格外, 可依用户需求订制平台

平台更换方式 Table Replacement

平台举升装备 Platform Lifting Equipment



大型平台移动车 Lifting Device



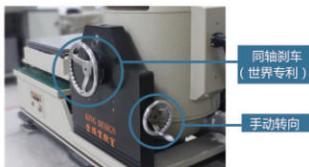
- ◆ 专为单一平台用户设计, 平台无需取下。
- ◆ 最大可提 高测试承载达2000公斤以上。
- ◆ 三轴测试机种搭配转向举升型, 减少用户操作困扰。
- ◆ 特殊安全插梢设计, 最大化保障用户安全。
- ◆ Design for single table to use. No need to remove.
- ◆ Load capacity up to 2,000 kg.
- ◆ Special safety pin device ensure user safety.

- ◆ 专为多平台用户设计, 可吊装各式尺寸。
- ◆ 各移动架量身订做尺寸, 操作简单。
- ◆ 可移动式设计, 附带刹车功能, 定位后无须担心 移动。
- ◆ 防坠安全设计, 有效化保障用户安全。
- ◆ Design for plurality table user.
- ◆ Each one was specific size, easier to operate.
- ◆ Rack with breaker, easier to location.
- ◆ Anti-drop design ensure user safe .

转向方式 Rotation Mode

手动转向结构 Manual Mode

- 台体特殊配重，转动不吃力。
- 特殊定位梢设计，垂直 / 水平定位容易辨识。
- 独有紧固设计，避免振动过程松动。
- The body with special counterweight, easy to rotate.
- Special location pin device, easy to locate.
- Unique Fastening Design guarantee it won't loosen during vibration process



电动转向结构 Auto Mode

- 电动转向系统，搭配操作保护设计，安全、省力。
- 垂直 / 水平自动感应定位，避免人为误操作。
- 独有紧固设计，避免振动过程松动。
- Auto mode use safety operation device, safe and convenient.
- Auto Sensor to locate, avoid human error in operation.
- Unique Fastening Design guarantee it won't loosen during vibration process



高级静音水平滑床 Higher Mute Slip Table

滑床床身采用整体式花岗岩制造，耐磨等级高，使用寿命远超过金属床身。花岗岩特性：

1. 长年自然形成，具有不易受环境影响之特点。
2. 耐磨等级相较铸铁床床体达7.5倍。
3. 花岗岩硬度大于铸铁床身达2倍。
4. 抗腐蚀性强、不存在磁化问题。

The Slip Table body use integrated granite fabrication. With high wearable, lifetime longer than metal. Granite Property:

1. Granite perennial by natural growth, difficult affected by environment.
2. The wearable rate is 7.5 times that of the cast-iron-bed.
3. Has double hardness of the iron.
4. With strong corrosion resistance, without magnetization problems.



水平滑床 Slip Table

动圈直径(mm)	90	140	200 / 260 / 330	450 / 650
产品型号 Model	2,000	2,000		适用频率 Usable Freq
	8	8		平台重量 Mass of Table
H-300	2,000	2,000		
	18	18		
H-450			2,000	
			21	
			2,000	
H-500		42	42	
			2,000	2,000
H-600			70	70
			2,000	2,000
H-750			148	148
			1,800	1,800
H-1000			233	233
			1,500	1,500
H-1200			438	438
				1,200
H-1500				630
				1,000
H-1800				780
				1,200
H-2000				279
				1,000
H-1214				
H-1418	适用频率 Limit Freq			
	平台重量 Mass of Table			

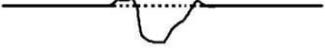
1. 适用频率为控制点 ± 3 dB

2. 正弦频率 / 1.4

3. 可依用户需求选购镁合金轻质平台，可减少30%重量

4. 除上述尺寸、规格外，可依用户需求订制平台

基准平面工作桌 Granite worktable

<p>铸铁平台 Cast iron Platform</p>	<p>基准平面台 Granite worktable</p>
 <p>铸铁平台表面受到相同撞击时立刻形成毛边, 损坏表面之平整度, 甚至降低等级, 易受温度影响, 对整体测试不利。 When be hit, the cast iron platform will have some burr to appear immediately, harm its flatness, or even to degrade, Easily affected by temperature and do harm to test.</p>	 <p>花岗岩表面受到撞击时颗粒会损失而不致于产毛边, 测试效果最佳。 When be hit, granite platform will lose particle without producing burr, thus make testing effect can reach the optimum.</p> <p>各尺寸高精度花岗岩平台, 可供用户采购。 High-precision granite platform with many size for your choose.</p> <p>平面精度可达 0.005 mm The accuracy of flatness is up to 0.005mm.</p>



冷却系统 Cooling System

静音式高压冷却系统 Silent High-Pressure Cooling System

- 内部采用透浦式鼓风机, 整机采铝合金轻量化设计。
- 箱体采用特殊散热设计, 有效减低抽风机热量 (诱导式抽风气流设计)。
- 常闭外扇型铝框马达, 搭配特殊轴心设计, 专为长时间使用客户设计, 有效降低风机故障率。
- 叶片特殊设计, 压力高、风压大、噪音低、寿命长。
- 专利消音设计, 噪音最小, 有效降低噪音至70 dB以下 (一般在93dB以上优化影响工作环境)。
- The internal adopt Toupu blower, the whole machine use aluminum alloy of lightweight design.
- The box use special thermal design, effectively reduce the blower heat. (Inductivity ventilation airflow design) .
- With special axial design, fan-shaped aluminum frame motor can effectively lower the failure rate of the blower to design for the customer that use for a long time.
- The blade is specially designed with high pressure, large wind pressure, low noise and long lifetime.
- With patent silencer design, the noise is the least of same type design, effectively dropped to below 70dB (generally above 93dB, optimize working environment) .



三综合试验机

AGREE CHAMBER

三综合试验是指温度、湿度加上振动的复合型试验，有效模拟实际环境所造成的综合应力试验，特别适用于航空航天、汽车零件、电子零件等使用环境，快速有效的找出零件或是设计上的瑕疵，预估产品可靠度。

搭配快速温变箱或是一般温变箱，振动应力可由一般振动机改为高应力电磁锤，因应客户测试需求做适当配置，达成三综合、HALT、HASS等试验需求。

Agree chamber is the multifunctional test of temperature, humidity and vibration, effectively simulate the effects in the actual environment, especially aerospace, car component and electronic parts. To find out the deficiencies of components or design quickly, and predict the product reliability.

Agree chamber can choose to equip with quick temperature chamber or ordinary chamber, while the vibration stress can be changed from ordinary shaker to high-stress electromagnetic hammer. Doing proper configuration with customers' need to meet the testing requirement of 3-function, HALT, HASS.



快速螺帽 Quick Nut

- ◆ 专为各类振动、冲击试验台设计之固定治具，独有的螺纹设计，免去使用者在固定螺帽时需要长时间锁附螺纹，仅需滑动至固定点旋转紧固即可。
- ◆ 螺帽采用钨钢一体式雕刻加工而成，质量可靠，经久耐用。
- ◆ 每个螺帽皆经由热处理后出厂，更有效提高使用寿命。
- ◆ 螺帽外观皆带有齿形加工，增加抓取力，方便用户紧固螺帽测试压条。
- ◆ The quick nut is designed to set the fixture of vibration testing simulator and shock tester. Unique thread design can save a lot of time to lock in fixing the nut, just to slide to the fixed point through rotating and affixing.
- ◆ The nut adopt tungsten steel to engrave, and has reliable and durable quality.
- ◆ Every nut has heat treatment, and more effective in prolonging the usage lifetime.
- ◆ The appearance of nut use the tooth process, enhances the gripping force, and is convenient for users to fasten Wooden Rod.

快速夹具 Quick Fixture

- ◆ 采用俄罗斯白松木制成，配合客户定制长度生产，接受客制化购订。
- ◆ 压条木纹细致且均质，测试结果稳定。
- ◆ 每根压条出厂前皆抛光并进行漆面处理，有效延长压条使用周期。
- ◆ The Wooden Rod is made of Russian white pine, varied specifications can be made based on customized length.
- ◆ Wooden Rod is tiny and homogenized, testing result is stable.
- ◆ Every Wooden Rod all deal with polishing finish, extend the usage lifetime.



产品规格 Product Specification

品名 Item	尺寸 / 规格 Size / Spec	型号 Model	产品单位 Unit
快速螺帽 Quick Nut	M8	FS-M8-4025	8颗/套 Set
	M10	FS-M10-5025	8颗/套 Set
定制型快速螺帽 Customized	M6 / M12 / 其它 Others	请洽业务人员 Please Contact Sales	

品名 Item	尺寸 / 规格 Size / Spec	型号 Model	产品单位 Unit
松木压条 Wooden Rod	15 ~ 100 cm	依订购型号 According to the Req	根 / pc

系统连接图 System Diagram



推力计算方式 Calculation

推力计算公式目的：

1. 确保振动测试时，是在购买设备最大出力之内使用。
2. 确保电磁式振动试验机使用寿命与减少设备老化程度。
3. 不易产生跳机现象发生与设备不易损坏。

KD9363EM-300F2K-25N80设备为例---上述机型300F为设备最大出力。

测试规范实例一：

振动测试规格（垂直测试、SINE正弦波测试）

测试频率范围：33.3Hz

测试时加速度值：4.4g (pk)

测试时间：4小时

待测物重量：5Kg (含夹具)

推力计算公式 $F = M \times G \times 1.2$

$F = (\text{音圈重量} 9\text{Kg} + \text{垂直测试平台} 7\text{Kg} + \text{待测物重量} 5\text{Kg}) \times 4.4\text{g} \times 1.2$

$F = 21\text{Kg} \times 4.4\text{g} \times 1.2$

$F = 110.88\text{KgF}$ (出力)

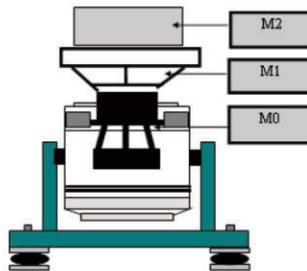
依测试规范实例一的振动测试规格，当振动测试时所需消耗110.88KgF (出力)。是符合300F振动出力范围以内，因此设备可以正常使用。

正弦推力 Sine Force (p-p)

$F = M \times A = (M0 + M1 + M2) \times A \times SF$

随机推力 Random Force (RMS)

$F = \text{Sine Force} \times \sqrt{2}$



M0 :	音圈重量 Armature Mass	kgw
M1 :	平台/夹具重量 Table or Fixture	kgw
M2 :	待测物重量 Specimen	kgw
A :	测试加速度值 Vibration Acceleration	g
SF :	安全系数 Safety Factor	1.2

Environmental STRESS SCREENING

环境应力筛选

简称为ESS，它是一种利用环境应力为特征，材料及零部件之物理规格为依据，进行产品的质量管制程序，其主要目的是将潜在于产品中之瑕疵提早曝露出来，使良品通过正常筛选，而将有潜在瑕疵的产品提前筛选出来或检修或剔除，以提高产品可靠度，如些得以保障制造者及使用者的基本机益及相互利益。

ESS的效益：

- 降低产品使用的失效率。提高产品使用时的可靠度值（MTBF）。
- 节省产品制造及维修成本。
- 在研发阶段可协助早期发现设计问题，提高工程可靠度，普缩短研究时间。
- 提早出货。
- 符合国际法规要求。

ESS is environmental stress screening, characterized by environmental stress, take the physical properties of materials and components as the basis, to do the QC procedure. Earlier to expose the potential defect of the product, through normal screening you can find out, To repair or pick out potentially defective products to enhance product reliability, thus protect the basic function and benefits for maker and user.

ESS advantages：

- Reduce the failure rate in usage and improve product MTBF
- Save the manufacture and maintenance cost.
- Find the design problem earlier, enhance the project reliability and shorten time in R&D stage.
- Make shipment earlier.
- Conform to national defense regulations.



Vibration CONTROLLER

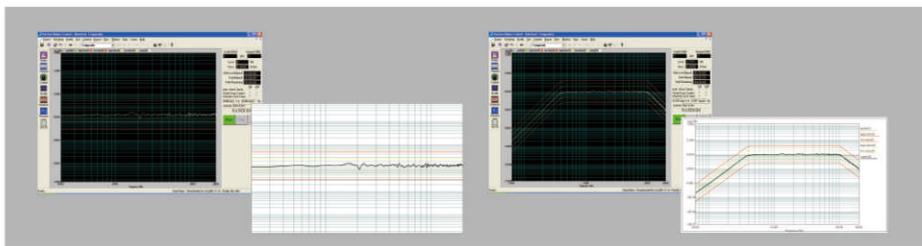
振动控制器

振动控制器采用先进的分布式结构体系，闭环控制由DSP处理器实现，PC机独立于控制环之外，保证了控制系统的实时性、高效率、能及时、快速地响应试验系统的变化。硬件采用主频高达300MHz的32位浮点DSP处理器、24位分辨率的ADC/DAC，配合高精度浮点数字滤波和硬件电路的低噪声设计技术，动态范围大于120dB，信噪比大于100dB。振动控制器可适用于电动、液压振动台的控制，具有完整系列的振动试验功能，能使振动台实现各种振动环境的模拟，如模拟产品在运输过程中所经历的复杂振动环境等，令测试工程师轻松评估外部激励与振动环境对测试产品造成的影响。

Vibration Controller adopt advanced distributed structure system, DSP processor decide closed-loop control, PC is independent from control loop, thus guarantee control system real-time and high-efficient, timely and quickly respond to testing system changes. Hardware use 32-bit floating point DSP processor with basic frequency up to 300MHz and 24-bit resolution ADC/DAC, and equipped with high-precision floating-point digital filter and low-noise design technology of hardware circuit, Dynamic Range: > 120dB SNR: > 100dB. Vibration Controller is applied to electric and hydraulic vibration table, complete series of vibration testing function can ensure vibration table to simulate kinds of vibration environment (E.g.: simulate complex vibration environment that product encountered in transportation process). thus engineer can easily assess effects on product caused by external excitation and vibration environments



振动频谱 Vibration Spectrum



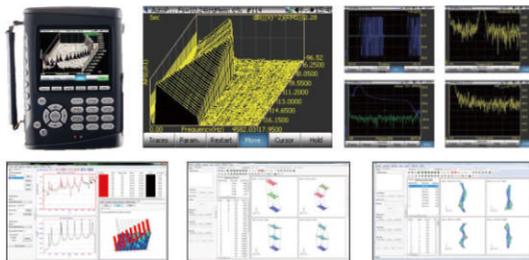
产品规格 Product Specification

型号 Model	VCS-913TG	Spider-81	VT-9002 / 4 / 8 / 16
输入通道 Input Channel	2 ~ 16	4 ~ 64	2 ~ 16
输出通道 Output Channel	1 ~ 2	2	1 ~ 2
控制频率 Control Freq (Hz)	1 ~ 5,000	1 ~ 4000	1 ~ 4680
频率分辨率 Freq Resolution (Lines)	6,400	1,600	3,200
动态范围 Dynamic Range (dB)	135	130	100
频率取样率 Sampling Rate	204.8 kHz采样频率 80kHz分析频宽	102.4 kHz / Channel	80 kHz
D/A交换能力 D/A Cap	24bits		
内部记忆储存 Internal Storage	有 yes		无 no
连接桌界面 Connection Interface	RJ-45 以太网网络		USB
语言支援 Language	简 / 繁中文、英文、日文 Chinese,English,Japanese		简 / 繁中文、英文
操作系统 Operation System	Windows 7以上操作系统		
标准软件功能 Standard Software	Sine、Random Shock、RSTD	Sine、Random、Shock	Sine、Random Shock、RSTD
可扩充软件 Option Software	Sine On Random、Random On Random、Resonance Search Tracking Dwell、FFT、Calibration、Kurtosis Control、TTH、SRS、THD...etc		

量测撷取系统 Data Acquisition System

1. 轻巧、便于携带，重量低于 5Kg。
2. 数据采集并行同步，每个通道采样频率高达 204.8kHz。
3. 基于 WindowsXP/7/8 系统，USB2.0 接口，即插即用。
4. 独立模拟抗混叠滤波器、独立 160 dB/Oct 数字滤波器。
5. 8input信道和1组信号源。
6. 120 dB 动态范围。
7. 自动生成报告，并利用 Word、PDF 直接打印。

1. Lightweight, easy to carry, weight is less than 5kg.
2. Parallel synchronous data acquisition
3. Windows XP/7/8 system, USB2.0 interface, plug and play
4. Independent analog anti-aliasing filter, Independent 160 dB / Oct digital filter
5. 8 input channel / 1 group of signal source.
6. Dynamic Range:120dB
7. Auto generate reports and use Word \ PDF to direct print.



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