

# Bench Top Temperature and Humidity Chamber

**KOMEGB**

## ■ Specifications ( at +20°C room temp. with no load)

Model	KMH-R series	KMH-L series	KMH-S series
	36R	36L	36S
Temp. range	-20°C~150°C	-40 °C~-+150°C	-60°C~+150°C
Interior size	W(mm)	300	300
	H(mm)	400	400
	D(mm)	300	300
Exterior size	W(mm)	460	460
	H(mm)	780	780
	D(mm)	1020	1020
Power(KW)	4.5	4.5	4.5
Weight(KG)	150	150	150
Heat up time	-20°C~+100°C, 35 min	-40°C~+100°C, 45 min	-70°C~+100°C, 60 min
Cooling time	+20°C~-20°C, 45 min	+20°C~-40°C, 60 min	+20°C~-70°C, 80 min
Humidity Range	20~98%R.H		
Temp. uniformity	±2.0°C		
Temp. fluctuation	±0.5°C		
Humidity uniformity	±3.0%R.H		
Temp. fluctuation	±2.0%R.H		
Standard accessories	Sight window*1, cable port(portΦ50mm)*1, shelves*2, chamber lamp*1		
Safety device (standard)	No fuse breaker, over pressure/over heat and over current protection for compressor, Over temp. protect, over load protect of blower, dry heat protection		
Control System	Balanced Temperature & Humidity Control System		
Refrigeration system	Air Cooled		
	Hermetic compressor, Single/Cascade stage refrigeration system		
	CFC-Free refrigerant(R404A/R23)		
Controller	Panel:7-inch LCD Touch panel, Chinese or English display selectable		
	Operation model :Program or fix point running		
	Memory capacity :120programs,1200steps,		
	All repeat 999 cycles, part repeat 99 cycles		
Interior material	Stainless Steel Plate(SUS 304)		
Exterior material	Baked Painting Steel Or Stainless steel(SUS304)		
Insulation material	Rigid polyurethane Foam and Glass Fiber Wool		
Ambient Temp.	+5°C~+35°C		
Wiring method	AC 380±10%50Hz ,3 phase 4 wires +Ground Wires		

- Note: 1. We reserve the right to change specifications without prior notice  
 2. Customized sizes and configurations available



# Programmable Temperature and Humidity Chamber

KOMEGB

## ■ Specifications ( at +20°C room temp. with no load)

Model	KMH-R series	KMH-L series	KMH-S series
	64R	64L	64S
Temp. range	-20°C~150°C	-40 °C~+150°C	-70°C~+150°C
Interior size	W(mm)	400	400
	H(mm)	400	400
	D(mm)	400	400
Exterior size	W(mm)	600	600
	H(mm)	1526	1526
	D(mm)	1200	1200
Power(KW)	4.5	4.5	4.5
Weight(KG)	150	150	150
Humidity uniformity	±3.0%R.H	±3.0%R.H	±3.0%R.H
Heat up time	-20°C~+100°C, 35 min	-40°C~+100°C, 45 min	-70°C~+100°C, 60 min
Cooling time	+20°C~-20°C, 45 min	+20°C~-40°C, 60 min	+20°C~-70°C, 80 min
Humidity Range	20~98%R.H		
Temp. uniformity	±2.0°C		
Temp. fluctuation	±0.5°C		
Humidity uniformity	±3.0%R.H		
Temp. fluctuation	±2.0%R.H		
Standard	Sight window*1, cable port(portΦ50mm)*1, shelves*2, chamber lamp*1		
Safety device (standard)	No fuse breaker, over pressure\over heat and over current protection for compressor, Over temp. protect, over load protect of blower, dry heat protection		
Control System	Balanced Temperature & Humidity Control System		
Refrigeration system	Air Cooled (Water Cooled Type is option)		
	Hermetic compressor,Single/Cascade stage refrigeration system		
	CFC-Free refrigerant(R404A/R23)		
Controller	Panel:7-inch LCD Touch panel, Chinese or English display selectable		
	Operation model :Program or fix point running		
	Memory capacity :120programs,1200steps,		
	All repeat 999 cycles, part repeat 99 cycles		
Interior material	Stainless Steel Plate(SUS 304)		
Exterior material	Baked Painting Steel Or Stainless steel(SUS304)		
Insulation material	Rigid polyurethane Foam and Glass Fiber Wool		
Ambient Temp.	+5°C~+35°C		
Wiring method	AC 380±10%50Hz ,3 phase 4 wires +Ground Wires		

Note: 1. We reserve the right to change specifications without prior notice

2. Customized sizes and configurations available





KMH-408S Temperature & Humidity test chamber

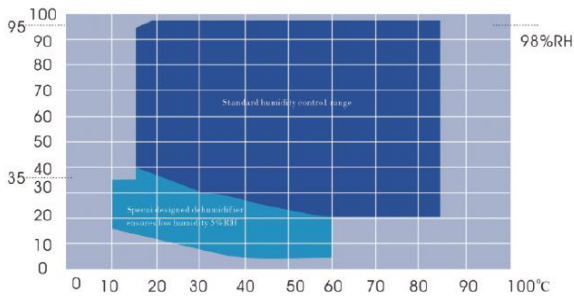


Solar Test Chamber



LED Test Chamber

Humidity Control Range  
At +20°C ambient temperature or +25°C water temperature and no Load



■ Standard humidity control range  
■ Optional: Special designed de-humidifier ensures low humidity at 5%RH

■ Optional accessories

- Cable Port: Φ100mm cable port is available
- Shelves
- Ro-type water purifier: R-80/day
- Inner glass door with operation port

A glass door can be provided behind the main door so that specimens can be observed.

Two operation ports of 100mm diameter are used for handing specimens inside the chamber without opening the glass door.

● Dehumidifier

The rotation regenerating dehumidifier ensures precise control of low humidity (5°C 5%RH) for electrostatic reliability tests.

● Temperature and humidity recorder



Recorder



Inner Glass Door



Dehumidifier



R.O. Water Purifier

# Programmable Temperature and Humidity Chamber



## ■ Specifications ( at +20°C room temp. Or+25°C water temp with empty load)

Model	KMH-R series					KMH-L series					KMH-S series						
	150R	225R	408R	800R	1000R	150L	225L	408L	800L	1000L	150S	408S	408S	408S	800S	1000S	
Temp. range	-20°C~150°C					-40 °C~+150°C					-70°C~+150°C						
Interior size	W(mm)	600	700	700	1000	1000	600	700	700	1000	1000	600	700	700	700	1000	1000
	H(mm)	600	700	750	1000	1000	600	700	750	1000	1000	600	750	750	750	1000	1000
	D(mm)	460	480	800	800	1000	460	480	800	800	1000	460	800	800	800	800	1000
Exterior size	W(mm)	880	980	980	1280	1280	880	980	980	1280	1280	880	980	980	980	1280	1280
	H(mm)	1730	1890	1940	2160	2160	1730	1890	1940	2160	2160	1730	1940	1940	1940	2160	2160
	D(mm)	1400	1460	1740	1750	1950	1400	1460	1740	1750	1950	1400	1740	1740	1740	1750	1950
Power(KW)	5.8	6	7.5	12.8	12.8	7.5	7.5	8.5	14.5	14.5	9.5	10.6	10.6	10.6	18.5	18.5	
Weight(KG)	240	280	400	500	580	250	300	420	530	600	330	450	450	450	550	650	
Humidity uniformity	±3.0%R.H			±5.0%R.H		±3.0%R.H			±5.0%R.H		±3.0%R.H				±5.0%R.H		
Heat up time	-20°C~+100°C, within 35 min					-40°C~+100°C, within 45 min					-70°C~+100°C, within 60 min						
Pull down time	+20°C~-20°C, within 45 min					+20°C~-40°C, within 60 min					+20°C~-70°C, within 80 min						
Standard accessories	Sight window*1, cable port(portΦ50mm)*1, shelves*2, chamber lamp*1, power cable *2m																
Safety device (standard)	No fuse breaker, over pressure、over heat and over current protection for compressor, Over temp. protect, over load protect of blower, dry heat protection																
Control System	Balanced Temperature & Humidity Control System																
Refrigeration system	Air Cooled (Water Cooled Type is option)																
	Hermetic compressor, Single stage refrigeration system, CFC-Free refrigerant(R-404/R-23)										Hermetic compressor, Cascade Refrigeration, CFC free refrigerant (R-404/R-23)						
Controller	Panel:7-inch LCD Touch panel, Chinese or English display selectable																
	Operation model :Program or fix point running																
	Memory capacity :120programs,1200steps,																
	All repeat 999 cycles, part repeat 99 cycles																
Humidity Range	20~98%R.H																
Temp. constancy	±0.5°C																
Humidity constancy	±2.5%R.H																
Temp. uniformity	±2.0°C																
Interior material	Stainless Steel Plate (SUS 304)																
Exterior material	Baked Painting Steel Or Stainless steel(SUS304)																
Insulation material	Rigid polyurethane Foam and Glass Fiber Wool																
Ambient Temp.	+5°C~+35°C																
Wiring method	AC 380±10% 50Hz ,3 phase 4 wires +Ground Wires																

Note: 1. We reserve the right to change specifications without prior notice 2. Customized sizes and configurations available

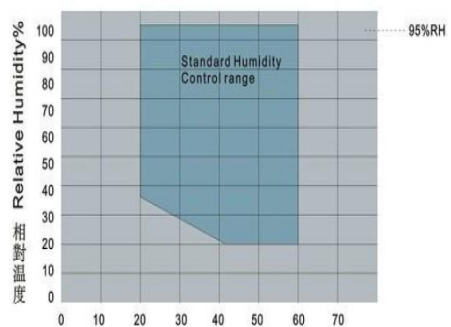


KMHW-4 walk-in chamber

**Optional accessories**

- Cable Port: Two size of cable port is available:  $\Phi 50\text{mm}$ ,  $\Phi 100\text{mm}$ .
- Double door
- Pass room: Provided to avoid disturbance of atmospheric temperature and humidity while opening the door.
- Floor reinforcement: Can be fixed if heavy specimen placed in the chamber for test.
- Carry-in inclined platform: Provided below the door to facilitate moving of specimens in and out through the door.
- Entire ceiling blow-out duct  
The extremely wide air inlet reduces the airflow rate (down to approx.  $0.5\text{m/s}$ )
- Dehumidifier  
The rotation regenerating dehumidifier (M-300) ensures precise control of low humidity ( $21^\circ\text{C}$ ,  $23\%\text{RH}$ ) for electrostatic reliability tests.
- Temperature and humidity recorder  
100mm width recording paper with 6 dots  
180mm width recording paper with 12 dots
- Status indication lamp  
Provide to signal chamber status and warnings when normal running, a malfunction running or stand by occurs.
- Water purifier  
Provided to keep the humidifier heater free from scale and ensure the supply of water to humidifier.
- Power socket
- Air cooled type condense or water cooled type condense

Humidity Control Range 濕度可控制範圍  
( $+5$  to  $+32^\circ\text{C}$  ambient temperature with no load)



## Walk-In Chambers

**KOMEGB**

■SPECIFICATIONS		Note: We reserve the right to change specifications without prior notice					
Model		KMHW-					
		4	6	8	13	17	21
Interior Dimensions	W(mm)	2100	3000	3900	3000	3900	4800
	H(mm)	2100	2100	2100	2100	2100	2100
	D(mm)	2050	2050	2050	4300	4300	4300
Working Volume(m <sup>3</sup> )		9	12.9	16.8	27.1	35.2	43.3
Exterior Dimensions	W(mm)	3250	4160	5050	5050	5050	5950
	H(mm)	2350	2350	2350	2350	2350	2350
	D(mm)	2250	2250	2250	2250	4500	4500
Safety Devices(standard)		No fuse breaker, over pressure, over heat and over current protection for compressor, over temperature protection, over load protection for blower, dry heat protection					
Standard accessories		Sight window*1, cable port(portΦ50mm)*1, chamber lamp*1, status indicator					
Control System		Balanced Temperature & Humidity Control System					
Refrigeration system		Water Cooled					
		Semi-hermetic compressor, single stage or cascade refrigeration system,					
		CFC free refrigerant ((R-404 and R-23)					
Controller	Panel	7-inch LCD Touch panel, Chinese or English display selectable					
	Operation model	Program or fix point running					
	Memory capacity	120 programs, 1200 steps, all repeat 999 cycles, part repeat 99 cycles					
	Accuracy	Temp.: 0.1% of F.S ± 1 digit Humidity: 0.1% of F.S ± 1 digit					
	Input	Temp.: pt-100, Humidity: pt-100 or ~5V DCV					
	Comm. port	RS-232 or RS-485 (Software is option)					
Temp. range		Maximum: 80°C, 120°C; Minimum: -60°C, -50°C, -40°C, -30°C, -20°C, -10°C, 0°C					
Humidity Range		10%, 20%, 30%~95%					
Temp. constancy		±0.5°C					
Humidity constancy		±2.5% R.H					
Temp. uniformity		±2.0°C					
Humidity uniformity		±5.0% R.H					
Ambient Temp.		+5°C ~ +35°C					
Wiring method		AC 380±10% 50Hz, 3 phase 4 wires + Ground Wires					
Heat up time		+20°C ~ +80°C, Within 60 min					
Pull down time		+20°C ~ -55°C, -40°C, -20°C, -10°C, Within 120 or 90 or 60 min					
Interior material		Stainless Steel Plate(SUS 304)					
Exterior material		Baked Painting Steel Or Stainless steel(SUS304)					
Insulation material		Rigid polyurethane foam					
Door size (mm)		Single wing: W800*H1800; Double wing: W1600*H1800;					

Note: 1. We reserve the right to change specifications without prior notice 2. Customized sizes and configurations available

## Rapid Temperature Change Chamber

**KOME G**



### Applications

Temperature adaptability test under the condition of rapid change, or gradient for electrical, electronic, instruments and other products or spareparts, particularly applies to environmental stress screening test (ESS)

### Features

- Rational Construction and fast cooling rate
- Frequency conversion control of wind speed.
- Adopts international brand of imported parts for cooling system to improve operation reliability
- Touch screen controller, friendly Man-Machine interface and safety device to ensure simple operation and easy maintenance.

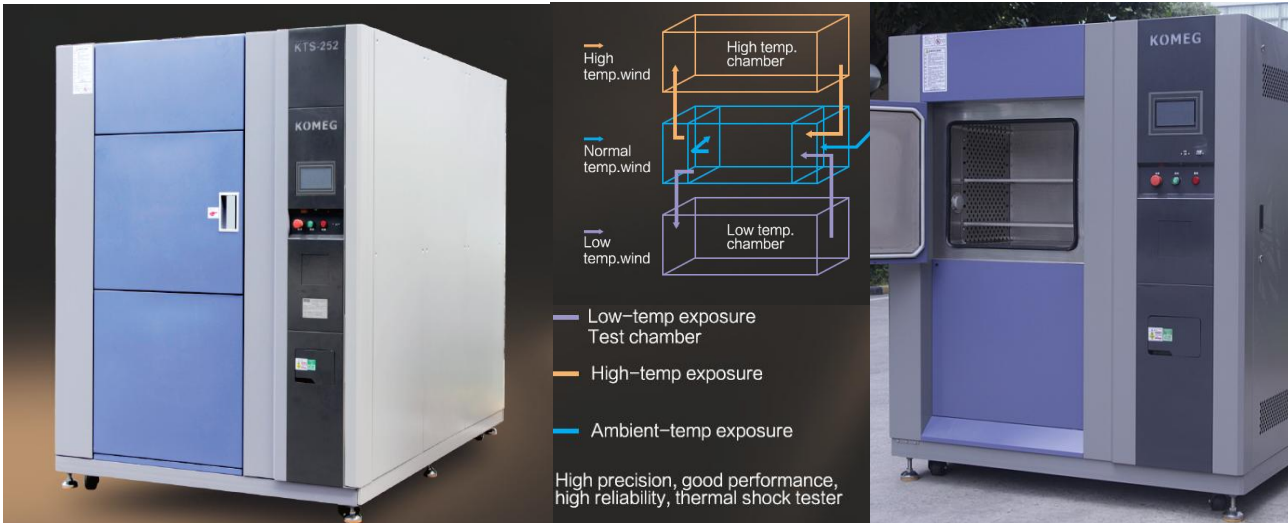
### Standards Implemented and met

- GB10592-89 Technical requirements for high and low temperature test chamber
- GB2423.1-1989 Low temperature test
- GB2423.2-1989 High temperature test mode

■ **Specifications** Note: 1. We reserve the right to change specifications without prior notice 2. Customized sizes and configurations available

Model	ESS-C							ESS-SC						
	225L-C5	225L-C10	408L-C5	408L-C10	1000L-C5	1000L-C10	1000L-C15	225S-SC5	225S-SC10	408S-SC5	408S-SC10	1000S-SC5	1000S-SC10	
Working Chamber Volume (L)	225		408		1000			225		408		1000		
Temp Rate of Change( °C/Min)	5	10	5	10	5	10	15	5	10	5	10	5	10	
Performance	-40°C~+150°C							-70°C~+150°C						
	Rapid Temp Change -40°C~+85°C At Average Control							Rapid Temp Change -70°C~+85°C Full Linear Control						
Humidity Constancy	±0.5°C													
Temp Constancy	±3.0°C													
Exterior Material	Cold-rolled steel sheet (Rust proof & Plastic Spray treated )/ Stainless Steel													
Interior Material	Stainless Steel Plate (SUS 304)													
Insulation Material	Rigid Polyurethane Foam													
Safety Devices	over pressure、 over heat and over current protection for compressor, over temp. protection,													
Compressor	Semi-Hermetic Compressor													
Cooling Mode	Water Cooled													
Control system	Balanced Temperature & Humidity Control System(BTC type)													
Heater	Iron-chrome wire heater													
Blower	Centrifugal Blower													
Observation Window	Glass incorporating heat generator													
Temp Sensor	Pt-100													
Controller	Touch screen programmable controller													
Ambient Temp.	+5°C~+35°C													
Power	AC 380V/50Hz 3phase 5 wires+ Ground wire													

# Thermal Shock Chamber (Including three-Zone & two Zone series as below)



## Three zone thermal shock chamber

■ **Specifications** Note:1. We reserve the right to change specifications without prior notice 2. Customized sizes and configurations available

Model	KTS-A Series							KTS-B Series							KTS-D Series						
	64A	100A	150A	200A	252A	300A	480A	72B	100B	150B	200B	252B	300B	480B	72D	100D	150D	200D	252D	300D	
Interior size	W(mm)	400	500	600	670	700	800	800	450	500	600	670	700	800	800	450	500	600	670	700	800
	H(mm)	400	450	500	600	600	600	800	400	450	500	600	600	800	400	450	500	600	600	600	600
	D(mm)	400	450	500	500	600	650	750	400	450	500	500	600	650	750	400	450	500	500	600	650
Exterior size	W(mm)	1440	1540	1640	1720	1750	1850	1850	1490	1540	1640	1720	1750	1850	1850	1490	1540	1640	1720	1750	1850
	H(mm)	1910	1840	1890	2000	2000	2000	2200	1790	1840	1890	2000	2000	2000	2200	1790	1840	1890	2000	2000	2000
	D(mm)	1825	1700	1830	1850	1930	1980	2500	1600	1700	1830	1850	1930	1980	2500	1600	1700	1830	1850	1930	1980
Test weight (KG)	5	10	12	15	18	20	20	5	10	12	15	18	20	20	5	10	12	15	18	20	
Low Temp. chamber	-55℃~-10℃							-70℃~-10℃							-80℃~-10℃						
Pre-heat time	+20℃~-55℃ ,Within 60 min							+20℃~-70℃ ,Within 60 min							+20℃~-80℃ ,Within 60 mins						
Test. chamber	-40℃~+150℃							-55℃~+150℃							-65℃~+150℃						
High Temp. chamber	+60℃~+200℃																				
Pre-heat time	+60℃~+200℃ ,Within 20 min																				
Recovery time	High-Temp Exposure 30 min																				
	Low-Temp Exposure 30 min																				
	Recovery time within 5 min																				
Safety device	No fuse breaker, over pressure, over heat and over current protection for compressor, over temperature protection, over load protection for blower, dry heat protection																				
Standard accessory	Cable port(portΦ50mm)*1, shelves*2																				
Interior material	Stainless steel plate (SUS 304)																				
Exterior material	Baked painting steel or stainless steel(SUS304)																				
Insulation material	Rigid polyurethane Foam+glass fiber wool																				
Refrigeration system	Water Cooled																				
	Semi-hermetic compressor, cascade refrigeration system, CFC free refrigerant (R-404/R-23)																				
Controller	Panel:7-inch LCD Touch panel, Chinese or English display selectable																				
	Operation model:Program or fix point running																				
Ambient Temp.	+5℃~+35℃																				
Power	AC 380±10% 50Hz ,3 phase 4 wires +Ground Wires																				

■ Specifications Note:1. We reserve the right to change specifications without prior notice 2. Customized sizes and configurations available

Model		TST-A Series					TST-B Series					TST-D Series				
		64A	100A	200A	300A	500A	64B	100B	200B	300B	500B	64A	100D	200D	300D	500D
Interior size	W(mm)	400	710	650	800	1000	400	710	650	800	1000	400	710	650	800	1000
	H(mm)	400	345	460	460	500	400	345	460	460	500	400	345	460	460	500
	D(mm)	400	410	670	815	1000	400	410	670	815	1000	400	410	670	815	1000
Basket size	W(mm)	860	1800	1790	1890	2070	860	1800	1790	1890	2070	860	1800	1790	1890	2070
	H(mm)	2070	1850	2700	2080	2161	2070	1850	2700	2080	2161	2070	1850	2700	2080	2161
	D(mm)	2000	2010	2795	2915	3235	2000	2010	2795	2915	3235	2000	2010	2795	2915	3235
Test weight (KG)		5	5	5	5	10	5	5	5	5	5	5	5	5	5	10
Low Temp. chamber		-55℃~-10℃					-70℃~-10℃					-80℃~-10℃				
Pre-heat time		+20℃~-55℃ ,Within 60 min					+20℃~-70℃ ,Within 60 min					+20℃~-80℃ ,Within 60 mins				
Test. chamber		-40℃~+150℃					-55℃~+150℃					-60℃~+150℃				
High Temp. chamber		+60℃~+200℃														
Pre-heat time		+60℃~+200℃ ,Within 25 min														
Recovery time		High-Temp Exposure 30 min														
		Low-Temp Exposure 30 min														
		Recovery time within 5 min														
Transfer time		within 10 seconds														
Safety device		No fuse breaker, over pressure, over heat and over current protection for compressor, protection, over load protection for blower, dry heat protection over temperature														
Standard accessory		Cable port(portΦ50mm)*1, shelves*2														
Interior material		Stainless steel plate ( SUS 304 )														
Exterior material		Baked painting steel or stainless steel(SUS304)														
Insulation material		Rigid polyurethane Foam+glass fiber wool														
Refrigeration system		Water Cooled														
		Semi-hermetic compressor, cascade refrigeration system, CFC free refrigerant (R-404/R-23)														
Controller		Panel:7-inch LCD Touch panel, Chinese or English display selectable														
		Operation mode:Program or fix point running														
Ambient Temp.		+5℃~+35℃														
Power		AC 380±10% 50Hz ,3 phase 4 wires +Ground Wires														



## Precise Oven / Cabinet Dryer

**KOME G**



### Application

Precise oven or cabinet dryers are mostly used for drying, baking, sterilization of non - volatile items and heat treatment test for mining enterprises, schools, medical and scientific research. Especially for simultaneous drying of different kinds of polymers in small quantities for drying materials for trial molding. They can also be applied in electronic engineering, electroplating, and pharmacy, paint baking, printing industries, etc. for preheating or drying related products.

### Features

- Provide a series of stable and reliable precision oven, KOV precise oven inside the box dimension is divided into eight kinds of standard specifications, can meet various requirements.
- Forced air supply circulation system and the special outlet design to ensure perfect humidity and temperature uniformity.
- LED digital temperature controller, easy operation and bring you happy customer experience.
- Air-exhausting Device is optional
- Other ultra high temperature oven series can reach 500 °C are available upon customized.

### Specifications

Model	KOV-50	KOV-125	KOV-216	KOV-290	KOV-500	KOV-720	KOV-1000	KOV-1500	KOV-1800
Interior size (W*H*D)mm	400*350*350	500*500*500	600*600*600	600*950*500	800*1050*600	900*1000*800	1000*1000*1000	1500*1000*1000	1600*1400*600
Exterior size (W*H*D)mm	1010*650*760	840*1240*760	1260*900*1100	870*1590*640	1160*1760*880	1300*1750*1000	1400*1750*1200	1850*17850*1266	1600*1940*1200
Capacity(KVA)	3.5	3.5	4.5	4.5	6	7.5	8.5	8.5	9.5
Power	AC220V±10% 1Φ 50Hz/60Hz				AC 380V±10% 3Φ4wire 50Hz/60Hz				
Temp. range	50℃~200℃ (300℃)								
Temp. constancy	±1.0℃								
Temp. uniformity	±2.0℃ (50℃~200℃) ±3.0℃ (101℃~200℃)								
Heat up time	50℃ to 200℃ within 50 min								
Interior material	Stainless steel plate								
Exterior material	Painted Stainless steel plate								
Insulation material	Glass wool								
Safety devices	No fuse breaker, over temp protection, ceramic fuse								
Accessories	Recorder, insulating layer								

Note: 1. We reserve the right to change specifications without prior notice 2. Customized sizes and configurations available





### Specifications

Interior dimensions(W*H*D) mm	1500*1280*550
Exterior dimensions(W*H*D) mm	1720*1980*750
Temp. range	Room Temp. +20~+100℃
Temp. constancy	±0.5℃
Temp. uniformity	±3℃
Test. capacity	88PCS/CYCLE(Custom made available)
Dimension	100W*100HJ*50D(MM)
Test range	FAN(full machines number)
Voltage range	3~50V
Current range	±5%
Speed	0-15000RPM,±8%
The detection speed	7-12sec/cycle

Note: 1.the specifications can be customized according to customer requirements

### Isolated type of burn-in room

#### Features

- Separate the product and loading area, easy to control temperature and maintain.
- Temp. range: 40-70℃±3/±5℃,
- Temp. constancy: ±0.5℃
- Uniformity: ±3℃
- Test frame materials: painted stainless steel or a combination of forming aluminum
- Insulation: with PU foam ( doors with double glazing ) insulation, so that the internal temperature is not subject to external factors, to achieve power saving effect
- Product hierarchy placement, Selection of layer height in accordance with the requirements, convenient access
- Computer monitoring system is optional.
- Noise level: ≤75dB

#### Application

Suitable for all kinds of electronic products, especially for products with heating characteristics  
 Product and loading area should be separated  
 Large-scale production

## Integral type of burn-in room

### Features

- Combined insulation, PID & closed temperature control
- Temp. range: 40-70°C ±3/±5°C,
- Temp. constancy: ±0.5°C
- Uniformity: ±3°C
- Insulation: with PU foam ( doors with double glazing ) insulation, so that the internal temperature is not subject to external factors, to achieve power saving effect
- Running test trolley, selection of layer height and size are in accordance with the requirements, convenient access, and easy product handling, easy to maintain.
- Computer monitoring system is optional.
- Noise level: ≤75dB

### Application

Suitable for all kinds of electronic products  
Different size is flexible and selectable.

### Application case 1: Burn-in room Cases in library group state



### Application case 2: DC Fan aging box and monitoring system



### Accessory: Sequence timer for burn in system

#### Features

- Can set 8 group of timer value
- Man-machine interface control, easy to operate.
- Auto reset function
- With 10A loading capacity and can bear lager load by using solenoid switch load
- Buzzer alarm or warning lamp available.
- Data can be saved and will not disappeared when turn off the machine.



Burn-in老化用雜合定時器  
Sequence timer for burn in system

## High & Low Temperature Altitude Test Chamber

**KOMEQ**



### Application (Precise drying test chamber)

Environmental adaptability and reliability test for the instruments and meters, electrical products, materials, spare parts, equipments, etc at a low pressure, high temperature, low temperature, under the effect of single factor or multiple factors at the same time. Test for electric performance parameters of the specimen. Mainly used in aviation, aerospace, information, electronics and other industries.

### Features

- External pressure type box body structure and stainless steel tank design, rational air circulation system and scientific layout of heating, refrigerating system.
- Adopts international brand of imported parts for cooling system to improve operation reliability
- High precision and stable performance with touch screen controller, friendly Man-Machine interface.
- Multiple layers of safety device to easy maintenance.

### Specifications

Model	KU-504L	KU-1000L	KU-504S	KU-1000S
Inner Size (D*W*H)mm	800*700*900	1000*1000*1000	800*700*900	1000*1000*1000
Capacity (KW)	11	15	16	18
Chamber Volume (L)	504	1000	504	1000
Performance	Temp range	-40℃~+150℃		-70℃~+150℃
	Temp constancy	±0.5%		
	Temp deviation	≥100℃, ±3.0℃ (at constant pressure with empty load) <100℃, ±2.0℃ (at constant pressure with empty load)		
	Cooling rate	0.7℃~1.0℃/min (Overall average)		
	Pressure range	Constant pressure ~1kPa		
	Pressure constancy	When ≥40kPa, ±2kPa, 4kPa~40pKa ±0.5kPa, when ≤4kPa, ±0.1kPa		
	Depressurization rate	Constant pressure~1kPa≤30mins (Normal temp)		
	Pressure recovery rate	10kPa/Min(adjustable)		
Material	Exterior material	Cold-rolled steel sheet(Rust proof&Plastic Spray treated)/Stainless Steel plate		
	Interior material	Stainless steel (SUS304)		
	Pressurized parts	High quality steel plate(Rust proof & Plastic spray treated)		
	Insulation material	High quality glass wool		
Cooling System	Compressor	Semi-Hermetic Compressor		
	Cooling Mode	Water cooled		
Temp regulating method	Balanced Temperature & Humidity Control System (BTHC)			
Pump	Rotary vane type vacuum pump			
Heater	Iron-chrome wire heater			
Sight window	Circular viewing glass incorporating heat generator			
Temp Sensor	Pt-100			
Controller	Touch Screen Controller			
Safety Devices	Over pressure, over heat and over current protection for compressor, over temp. protection, over load protection for blower, Hydraulic and Water lack Protection,			
Standard Accessory	Sight window, Cable Port( 1 located on the left side), Baffle, Baffle frame*2			
Power	AC380V/50Hz, 3Phase 5 wires+ Ground Wire.			

Note: 1. We reserve the right to change specifications without prior notice 2. Customized sizes and configurations available

**Application**

Can match appropriate vibration table. Meet all kinds of the corresponding temperature, humidity, vibration, three comprehensive test requirements. Widely used in aviation, aerospace, shipbuilding, electrical, electronics, communications and other fields

**Features**

- Combined laboratory structure and refrigeration system as a whole, compact and beautiful, easy operation.
- Refrigeration compressor, LCD touch screen and main parts are imported brand, equipped with RS232 communication interface.
- Good mechanical transmission and match different types of vibration table.



**Specifications**

Model		KMVT	
		408	1000
Working chamber volume (L)		408	1000
Interior size (W*H*D) mm		600*850*800	1000*1000*1000
Safety device		No fuse breaker, over pressure, over heat and over current protection for compressor, Over temp. protection, over load protection for blower, Hydraulic and Water lack Protection dry heat protection	
Power		AC 380V/50Hz ,3phase 5 wires+ Ground wire	
Temp regulating mode		Balanced Temperature & Humidity Control System (BTC)	
Ambient temp		+5℃~+35℃	
Performance	Temp range	-40℃~+150℃/ -70℃~+150℃	
	Temp constancy	≤0.5℃	
	Temp uniformity	±2.0℃	
	Humidity constancy	±2.5%RH	
	Humidity range	2.0%RH~98%RH	
	Humidity uniformity	If humidity≤75%RHJ, ±3.0%RH; f humidity>75%RHJ, ±5.0%RH	
Cooling rate		≤5℃/Min or ≤10℃/Min (-55℃~+80℃ within humidity range)	
Material	Exterior material	Cold-rolled steel sheet (Rust proof & Plastic Spray treated) / Stainless Steel plate	
	Interior material	Stainless steel plate(SUS 304)	
	Insulation material	Rigid polyurethane foam	
Cooling system	compressor	Semi-Hermetic Compressor	
	Cooling mode	Water cooled	
Heater		Iron-chrome wire heater	
Blower		Centrifugal Blower	
Sight window		470mm*350mm Glass incorporating heat generator	
Temp sensor		Pt-100	
Controller		Touch screen controller	
Shaking table		Custom made as required	

Note: 1. We reserve the right to change specifications without prior notice  
 2. Customized sizes and configurations available

# Salt Spray Tester



### Application

Corrosion resistance test for products after treated by plating, anodized, spraying, and anti-rust .

### Features

- High temperature resistant material imported from Germany to ensure long-term use
- Complete system for water level and water temperature protection to ensure safe use
- Nozzle spray pressure, work room temperature and working time adjustable, easy operation
- Accurate glass nozzle to assure evenly spread and no crystallization block.

### Standards implemented and met

- 1 GB/T 2423.17-1993 salt spray test
- 2 GB/T 2423.18-2000 salt spray test
- 3 GB/T 10125-1997 salt spray test
- 4 ASTM.B117-97 salt spray test
- 5 JIS H8502 salt spray test
- 6 IEC68-2-11 salt spray test
- 7 IEC68-2-52 1996 salt spray test
- 8 GB.10587-89 salt spray test
- 9 CNS.4158 salt spray test
- 10 CNS.4159 CASS Copper accelerated acid salt spray test
- 11 GB/T 12967.3-91 CASS Copper accelerated acid salt spray test

### Specifications (Note: We reserve the right to change specifications without prior notice)

Specifications for Salt Spray Test Chamber :					
Model	KM-F-60A/C	KM-F-90 A/C	KM-F -120 A/C	KM-F-160 A/C	KM-F -200 A/C
Inner Box Size(L*W*H)mm	600*450*400	900*600*500	1200*800*500	1600*1000*500	2000*1000*600
Outside Box Size(L*W*H)mm	1070*580*1030	1380*800*1150	1700*900*1210	2250*1200*1250	2650*1200*1350
Equipment Material	Both inside & outside shell adopt imported P.V.C rigid plastic board, and tank cover uses imported transparent P.V.C rigid plastic board				
Temperature Range	35℃-55℃				
Temperature Fluctuations	±0.5℃				
Temperature Uniformity	±2℃				
Temperature Precision	±1℃				
Test Chamber Temperature	Spray Method(NSS AASS)35±1℃;Spray Method(CASS )50±1℃				
Pressure Barrel Temperature	Spray Method(NSS AASS)47±1℃;Spray Method(CASS )63±1℃				
Brine Temperature	35℃±1℃				
Spray Quantity	1.0-2.0ml/80cm²/hr				
PH	NSS(6.5-7.2);AASS CASS(3.1-3.3)				
Lab Volume	108L	270L	480L	800L	1200L
Brine Tank Capacity	10L	15L	20L	20L	30L
Power	1 phase,AC220V,50/60Hz,20A		3 phase,AC380V,50/60Hz,30A		
Multiple Safety Protection Devices	Current discharge protection, over pressure protection, over temperature protection , over load fuse protection				
Accessories	Testing Salt/Measuring tank/Equipment each 1 set				
Note: 1. We reserve the right to change specifications without prior notice 2. Customized sizes and configurations available					

# Vibration Test (Electromagnetic & Mechanical) Machine



## 1. Electromagnetic vibration test machine (K & KV series)

### Features

- Unique aluminum alloy magnetic isolation material table to ensure complete elimination of adverse effects on specimen caused by high energy magnetic fields.
- Table was up and down driven by electromagnetic force, with wide range of frequencies and low waveform distortion
- Reliable and significant test results with wide application.

### Application

Electromagnetic Vibration Test Machine are used for reliable test for finding fault, simulating actual conditions, reviewing the product structure strength in defense, aerospace, communications, electronics, automotive, household appliance industries.



### Specifications for K series Electromagnetic vibration test machine

Model		K-100B	K-150B	K-200B	K-300B	K-600B	K-1000B
System Model	Frequency range (Hz)	5~4000	5~4000	5~4000	5~4000	5~3000	5~3000
	Rated Sinusoidal force (N)	980	1470	1960	2940	5880	9800
	Rated random Thrust (Nrms)	980	1470	1960	2940	5880	6680
	Maximum acceleration) (m/s <sup>2</sup> )	490	735	980	980	980	1176
	Maximum velocity (m/s)	1.75	1.15	1.75	1.6	1.5	2.0
	Maximum displacement (mm p-p)	25	25	25	25	25	25
	maximum load (kg)	70	70	70	120	200	120
	capacity (KVA)	4.5	4.5	6.5	7.5	17	20
Power	AC380V±10%,3PH50HZ						
Shaker Table	Weight of testing samples (kg)	2	2	2	3	5.6	8.3
	Table size (mm)	Φ110	Φ110	Φ110	Φ150	Φ200	Φ200
	Table weight(kg)	320	320	320	320	630	940
	Table size(L×W×H)mm	660×550×650	660×550×650	660×550×650	730×550×650	790×580×660	830×680×825
Performance	Maximum output power (KVA)	1	1	2	3	5	10
	Weightkg (kg)	210	210	230	240	270	290

### Specifications for KV series Electromagnetic vibration test machine

		K-200L	K-300L	K-600L	K-1000L	K-1500L
System Model	Frequency range (Hz)	2~2500	2~2500	2~2500	5~3000	5~3000
	Rated Sinusoidal force (N)	1960	2940	5880	9880	14200
	Rated random Thrust (Nrms)	1960	2058	4116	9880	14200
	Maximum acceleration) (m/s <sup>2</sup> )	245	367	490	1020	784
	Maximum velocity (m/s)	1.2	1.2	1.1	2	1.85
	Maximum displacement (mm p-p)	40	40	51	51	51
	maximum loa(kg)	140	140	300	140	300
	capacity (KVA)	6	8	11	22	28
Power	AC380V±10%,3PH50HZ					
Shaker Table	Weight of testing samples (kg)	8	8	12	9.5	18
	Table size (mm)	Φ230	Φ230	Φ230	Φ200	Φ280
	Table weight(kg)	350	350	600	950	1600
	Table size(L×W×H)mm	720×560×670	720×560×670	790×600×710	920×610×790	900×790×990
Performance	Maximum output power (KVA)	2	3	5	15	20
	Weightkg (kg)	210	230	270	290	390

		K-2000L	K-3000L	K-4000L	K-5000L
System Model	Frequency range (Hz)	5~3000	5~2500	5~2500	5~2500
	Rated Sinusoidal force (N)	19600	29400	39200	49000
	Rated random Thrust (Nrms)	19600	29400	39200	49000
	Maximum acceleration (m/s <sup>2</sup> )	980	980	980	980
	Maximum velocity (m/s)	1.85	1.7	2.0	1.5
	Maximum displacement (mm p-p)	51	51	51	51
	maximum loa(kg)	300	500	500	1000
	capacity (KVA)	33	45	50	76
Power	AC380V±10%,3PH50HZ				
Shaker Table	Weight of testing samples (kg)	18	25	35	40
	Table size (mm)	Φ280	Φ320	Φ440	Φ440
	Table weight(kg)	1600	2000	2000	3500
	Table size(L×W×H)mm	900×790×990	1000×880×1060	1420×1210×1100	5100×1310×1170
Performance	Maximum output power (KVA)	25	30	35	45
	Weightkg (kg)	410	410	900	920

## 2.Mechanical Vibration test machine

### Specifications

Model	VS-5060
Frequency range	10-80Hz
Frequency accuracy	±0.05Hz
Acceleration range	0~11G(peak)
Maximum Payload	80kg
Test Mode	Fix; Sweep; Multi-random
Displacement range	0~2.8mm p-p, adjustable
Table size	500*600mm
Test program number	No limit
Test time	No limit
Power	AC220V 1Φ 50Hz 5A
Vibrator dime	W625*D525*H690mm



### Features

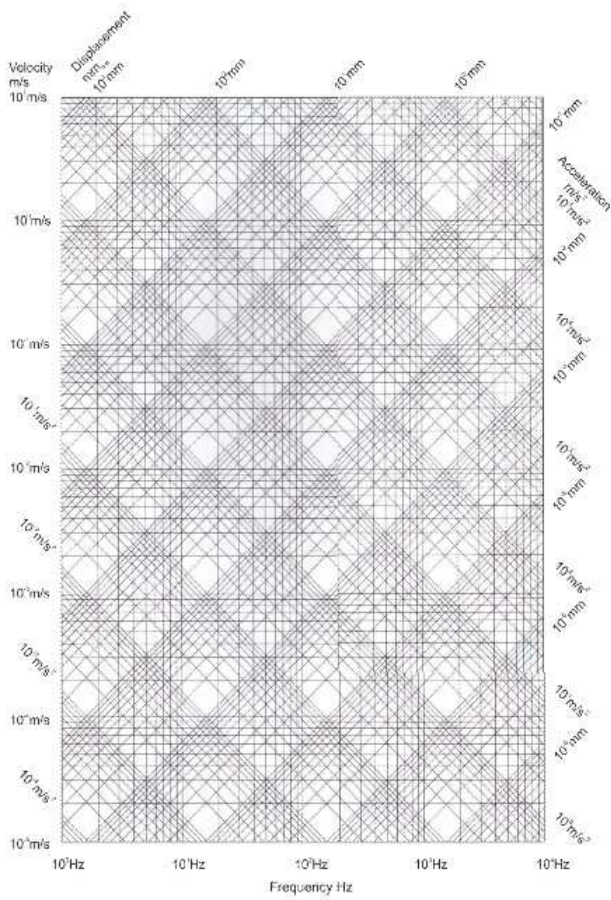
- Vibration frequency with digital display and high precision
- Synchronous mute broadband transmission with low noise
- Rail-style specimen clamp ensure easy and safe operation.
- Heavy steel base with shock absorbing rubber to ensure strong load capacity, steadily running and easy installation.
- Retrofit otary motion on similar advanced equipment, meet the specifications for transport in Europe and America.

### Application

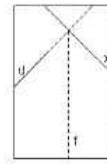
Reliability test for product packaging in toys, electronics, furniture, gifts, and ceramic industry

### Relation among Acceleration, Velocity and Displacement

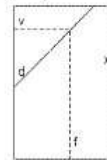
Relation	Equation for estimation
Acceleration $x[m/s^2]=[2\pi f]^2 d/1000=2\pi f v$	$x[m/s^2]\approx 0.0394 d f^2 \times 1$
Velocity $V[m/s^2]=2\pi f d/1000=x/2\pi f$	$V[m/s]\approx 0.00628 d f \approx 0.159 x/f \times 1$
Displacement $d[mm]=1000x/[2\pi f]^2=1000v/2\pi f$	$d[mm]\approx 25.5 x/f^2 \approx 159.2 v/f \times 2$
※1 Divide the acceleration value by 9.8 when its unit is G.	
※2 Multiply the acceleration value by 9.8 when its unit is G.	



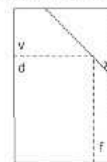
Relation among displacement, acceleration, x and frequency, f.



Relation among velocity, v, frequency, f and displacement, d.



Relation among velocity, v, frequency, f and acceleration, x.



- d: Displacement(mm<sub>rms</sub>)
- v: Velocity(m/s<sub>rms</sub>)
- x: Acceleration(m/s<sup>2</sup><sub>rms</sub>)
- f: Frequency(Hz)