HUNG TA INSTRUMENT CO., LTD.

Tire & Wheel Testing Machine

Advanced Testing Systems

helping engineers worldwide develop safer,
more reliable materials and components.

ISO 9001 SGS

CE

Tire & Wheel
quality brilliant Testing Machine

HT-2811T3 Tire and Rim Endurance Highspeed Rotatable Drum Testing Machine

HT-2811T3
Multi-Functional Tire Rim
Endurance Testing Machine

A. Testing purpose

Conforming to the standard of ***SAE J2562,*** much closer to the real running condition of road wheels, in order to understand its feature of endurance.

	1st Station	2nd Station	3rd Station
Suitable diameter of wheels	12" ~ 32"		12" ~ 26"
Maximum radial loading	35 kN / 50 kN / 100 kN (or as request)		20 kN，Axial load 15 kN (or as request)
Maximum testing speed	35 ~ 350 km/hr		
Size of steel drum	Ø 1707 mm ± 1%，width 500 mm		In-wheel diameter：1000 mm
Camber angle	± 10°，accuracy ± 0.1°	Only for radial endurance test	+10°，-5°，accuracy ± 0.1°
Slip angle	± 10°，accuracy ± 0.1°		
Braking mechanism	Pneumatic disk braking device		

B. Testing Requirements

1、Inside drum test:

Suitable wheel: O.D. 500～800mm × W100～220mm

Suitable rim: 12" ~ 17" with testing tyre

Remarks: According to the standard of SAE J2562, the tire outside diameter is within 50% to 80% of the drum internal diameter. The diameter of the drum is 1000 mm, so the suitable range of wheel diameter is within 500~660 mm, or we can manufacturer as per your special requests.

2、According to the standard of SAE J2562《Biaxial Wheel Fatigue test》, The tire-wheel assembly can be tested by radial load only, or radial load and lateral load simultaneously. Camber angel can be adjusted freely and be convenient for moutning different sizes of wheel samples. For maximum loading, it is:

Radial loading: 0~20 kN

Axial loading: 0~15 kN

C. Functional parameters

1、Steel drum

a. Inside diameter: 1000 ± 1%（or as requested）

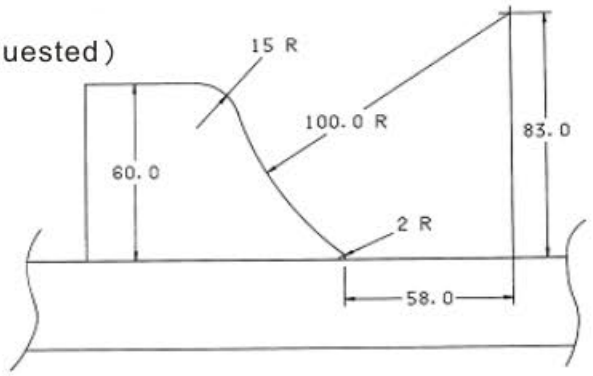
b. Width: inside 500 mm, including curb（or as requested）

c. Suitable range of wheel sample:
O.D. 500～800 mm × W160～260 mm
（or the samples supplied by buyer with related tire assembly）

d. Dynamic unbalance: ISO G2.5 class

e. Range of speed: 0～900 rpm ±1%

f. Accuracy of rpm sensor: ±0.1 rpm



2、Driving method of steel drum: Servo motor

3、Radial loading mechanism of the first and the second station

a. Driven by servo motor

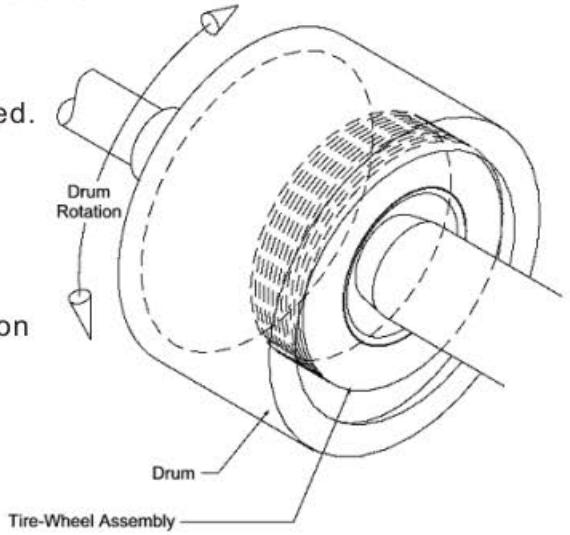
b. Static control accuracy: ±1%

c. Radial loading can be 35, 50, 100 kN or as requested.

d. Slip angle / Camber angle: ±10° (or as requested)

e. Lubricating system: automatic from the bearing box of steel drum.

f. Load sensor: 35, 50, 100 kN (or as requested.)



4、 Radial and axial loading mechanism of the third station

a. Driven by servo motor

b. Axial load measuring accuracy: ±1%

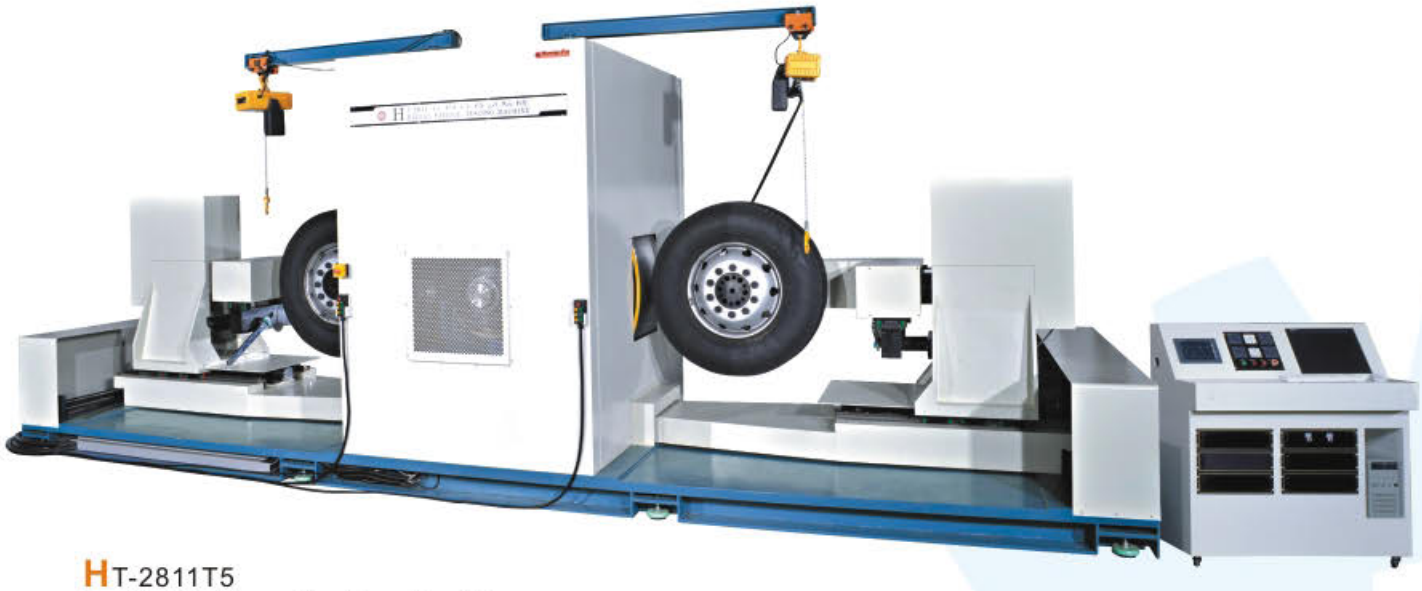
c. Axial load: Max. 15 kN (available to preset), camber angle +10°, -5°.

d. Lubricating and cooling system: automatic from the bearing box of steel drum.

e. Load censor: 50 kN load cell.

5、Braking device: Disk type braking

HT-2811 Radial Fatigue Testing Machine



HT-2811T5
Radial Fatigue Testing Machine

HT-2811T10
Radial Fatigue Testing Machine

Camber Angle

Slip Angle

HT-2811 Radial Fatigue Testing Machine

		Endurance test		High speed test	
		W	WR	T	TR TP TM (as requested)
Suitable wheel size		12" ~ 24"	12" ~ 26"	Ø350 ~ Ø1000 mm	Ø350 ~ Ø1400 mm
Max. radial loading		50 kN	100 kN	50 kN	100 kN
Max. test speed (adjustable)		10 ~ 150 km/hr （or as requested）		35 ~ 350 km/hr （or as requested）	
Radial loading mechanism	No. of specimen	2 stations		Biaxial	
	Loading deviation	± 2.5% 以內			
	Steel drum	Ø 1700 mm ±1%，width 500 mm (dynamic balancing conforms to JIS grade 2.5)			
	Camber angle	± 15°，accuracy ± 0.1°			
	Slip angle	± 15°，accuracy ± 0.1°			
	Braking mechanism	Pneumatic disk braking			
Temp control device		Rotating wheel temperature to be held at ± 38.3℃ （optional）			
Auto lubricating device		Temperature detecting and auto lubricating device at the bearings of both sides of steel drum and spindles of wheels			
Tire lifting device		Electric lifting device with extended arm for wheel, both stations			
Emergency stop device		Equipped at control bench, available to avoid any emergency status			
Protection shield, door protection device		Protection shield at both sides of the frame, with auto shut down function when door is opened. （optional）			
Loading deviation setting function		Loading deviation greater than preset value, loading mechanism s unloading and giving alarm, flat tire detecting device, minimum preset minimum radius value, when tire is leaking or flat tire, loading mechanism would go unloading automatically			
Failure detecting device		Loading mechanism safety stroke preset with limit switch protection device, avoid clashing owing to out of control			
Viewing window		Viewing windows and lighting device at both testing areas (optional)			
Display of data		Mileage, spindle rotating speed, speed, timer, number of revolution, temperature			
Optiona l: special functions		1. Dynamic radius testing system : accuracy ± 0.3 mm			
		2.Static radius testing system : accuracy ± 0.3 mm			
		3. Tire surface temperature measuring system: after test ends and braking is finished, surface temperature of tire can be measured by infrared non-contact detectors. （adjustable mechanism device）			
		4. Tire rolling resistance measuring system: rolling resistance to be measured by load cell, and transporting to computer for further calculation.			
		5 · Tire inner pressure measuring and controlling system : Tire pressure measuring data transmitted to computer for display and storage.			
		6. Automatic digital tire inflating device: Indicator (LED display), memorizing function, maximum inflating pressure 170 psi, minimum inflating pressure 5 psi (accuracy ±1 psi)			

Special options : 1. Rolling resistance testing function, because of its special features, should be specially ordered at different price.
2. 200 kN can be manufactured as well at your special request and requirements

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HT-2724-2
Motocycle Cornering
Fatigue Testing Machine

HT-2724-2 Motocycle Cornering Fatigue Testing Machine

HT-2724-2
Motocycle Cornering Fatigue Testing Machine

	HT-2724-2
Conforming to	JASO T23-85、ISO 8644-2006
Capacity	200 ~ 2000 N-m
Maximum speed	600 rpm
Loading method	Pneumatic
Suitable testing wheel range	14" ~ 20"
Rotated by	Servo motor 11.0 kW
Size of sample mounting	850 mm
Braking	Pneumatic disk braking
Auto control	PLC control
Specimen fixture	Taylor make as per actual sample
Dimensions	1550 × 1632 × 1400 mm
Width adjustment of wheel rim	Electric up / down
Weight	3500 kg

HT-2724 Cornering Fatigue Testing Machine

- This equipment is designed and manufactured as per major international testing standards like CNS, REV, FEBI, JIS...etc.
- This equipment can be used by auto test, monitoring which saves your time and energy.
- This equipment is applicable for various wheel diameter and width, offset. Easy to mount your test sample that you don't have to insert or replace lots of spacers.

HT-2724
Cornering Fatigue Testing Machine

	HT-2724-10	HT-2724-20	HT-2724-35
Conforming to	CNS 7135、SAE T328、REV、FEB2005、JIS D4103		
Maximum capacity	10000 N-m	20000 N-m	35000 N-m
Speed	100 ~ 750 rpm		
Suitable range	11" ~ 19"	12" ~ 24"	12" ~ 26"
Specimen fixture	U type fixtures x 12 pcs.		
Mechanical braking	Resistor braking		
Generation of torque	CentrifugalCentrifugal		
Auto control	PLC Centrifugal		
Deflection sensor	Key-in setting, analog detecting sensor		
Sample mounting	Automatic centre alignment		
Rotating speed stability	±1 %		
Loading stability	±1 %		
Load detection	10000 N-m	20000 N-m	35000 N-m
Power of motor	5 KW	7.5 KW	11 KW
Vibration isolator	YS-5000S		
Dimensions (approx.)	150 x 150 x 150 cm	170 × 170 × 150 cm	170 × 170 × 150 cm

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HT-2706TF Series
Tire Stiffness Testing Machine

HT-2706TF Series Tire Stiffness Testing Machine

This equipment is designed and manufactured as per major international testing standards, which is a multi-functional tire testing machine for various testing scopes.

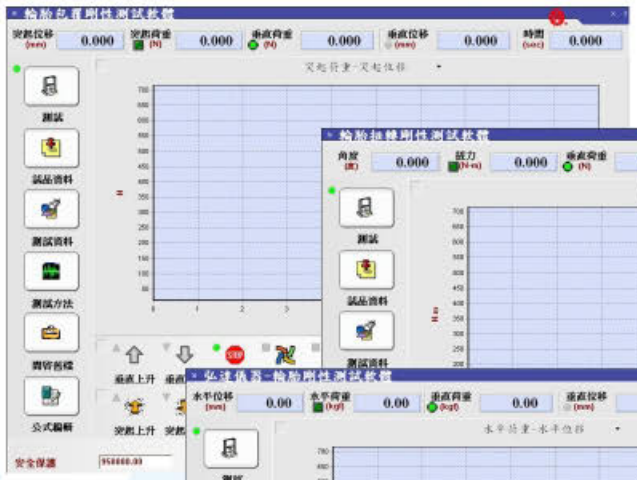
- Radial loading dry/wet friction test
- Radial loading stiffness test
- Radial loading latitudinal stiffness test
- Radial loading longitudinal stiffness test
- Radial loading Torque stiffness test
- Tread Coating Stiffness (protrusion) test
- Radial loading resistor test
- Bead unseating test unseating
- Plunger test

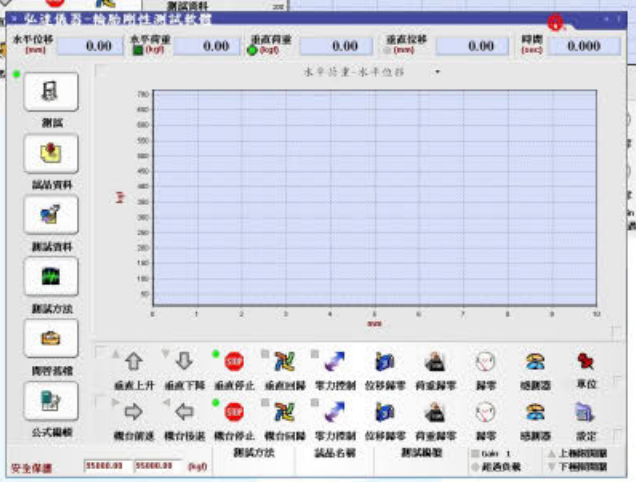
HT-2706TF
5 In 1 Tire Stiffness Testing Machine

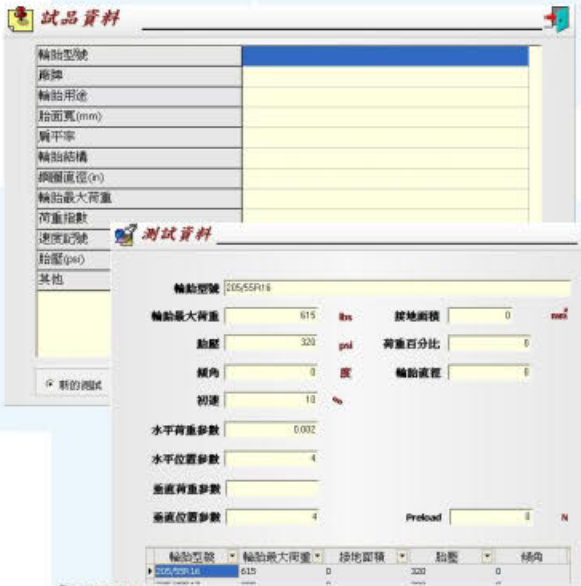
	5-in-1 stiffness	Tire surface pressure analysis	Tire resistor detection
Type	TF5	TFA	TFΩ
Maximum capacity	20 / 50 / 100 kN		
Test speed	0.2 ~ 200 mm/min accuracy ± 0.02 mm		
Maximum size of wheel sample	Ø 400 ~ Ø 1500 mm，width 180 ~ 480 mm or as requested		
Stroke measurement	Max. 1500，accuracy ± 0.1 mmaccuracy		
Controller	HUNG TA Interface		
Driving method	AC servo motor & servo driver		
Power	3 Ø 220 V / 380 V / 415 V，50/60 Hz		

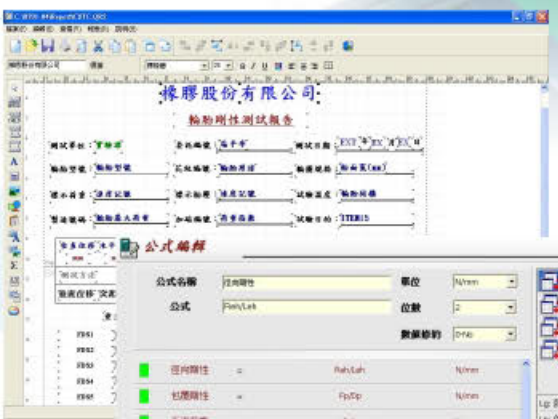
HT-2706TF Series

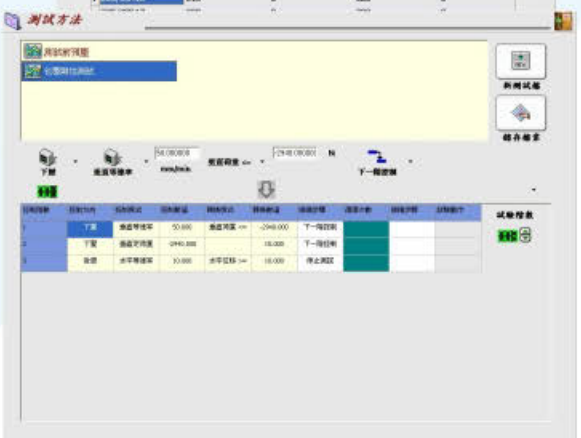
The Reports

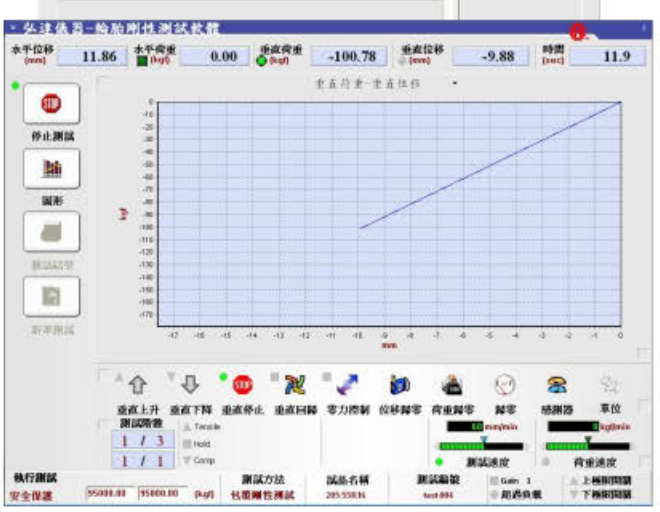












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HT-8041RHI
RHI Road Hazard Impact
Testing Machine

HT-8041 RHI Road Hazard Impact Testing Machine

This equipment is designed and manufactured as per the testing standard of SAE J1981, which imitates the tire running on the road, and measure the effects of the pit and bumps impacting against the tire, in order to evaluate the tire being impacted, how road wheel can resist the change of tire pressure, and the damage to the tire.

- Pendulum impact length: 1828.8 mm, can be extended to 2028.8 mm, with a 54 kg weight drop hammer at the end of pendulum, swinging radius of 1835.2 mm
- Automatic pendulum lifting and release device
- Hammer angle adjustment: X axis ± 30°, Z-axis ± 85°
- Pendulum test angle: Max. 179°
- The weight of pendulum plus drop hammer: 164 kg
- Drop hammer falls at 5 ° position, the impact speed of 23.33 km / hr
- Test tire specifications: tire outside diameter 300 ~ 1000 mm
- Barometric pressure sensing device, with measurement accuracy: 0.5%
- Accelerometer, with measurement accuracy: 1%
- Computer generating factors: tire pressure, acceleration and control parameters
- Protection shield (optional)

HT-8041RHI
Tire Impact Testing Machine

HT-2912 Tire Rim Impact Tester

- 13 degrees Tire rim impact tester – manufactured as per the standard of GB, ISO, SAE, JIS and VIA.
- 30 degrees Tire rim impact tester – manufactured as per the standard of JIS and VIA.

Applicable specifications : This machine can conduct tests as per the standards of GB, ISO 7141, SAE J175, JIS D4103. Testing range: 12"~26" for wheel diameter and 4"~12" for the width.

HT-2912
Tire Rim Impact Tester

	HT-2912-13	HT-2912-30
Impact angle	13°	30°
Overall weight of hammers	1055 kg	1010 kg
Main hammer weight	350 kg	910 kg
Aux hammer weight	13 x 50kg、4 x 10 kg、3 x 5 kg	100 kg、62 kg (excluding weight of springs)
Size of impact surface	375 (L) x150 (W) cm	380 (L) x152 (W) cm
Up/Down speed control range	0 ~ 2 m/sec	0 ~ 2 m/sec
Falling height ≧	300 mm	500 mm
Power of motor	2 HP	2 HP
Power	3 Ø 220 V / 380 V / 415 V、50/60 Hz or as request	
Working air pressure	4 ~ 6 kg / cm²	4 ~ 6 kg/cm²
Dimensions (WxDxH)	1950 x 2200 x 3250 mm	1950 x 2200 x 3250 mm

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