

Partners



ZYS bearing testing technology
and bearing testing machines

ZYS bearing test center has been engaged in bearing test technology research, test equipment development and test standard formulation since 1960s. It has a high reputation and influence in the bearing industry, and is praised as "the cradle of bearing test technology in China".

⚙️ Test service



In the early 1960s, China introduced dozens of Soviet bearing testing machines and testing technologies, and established "the first bearing laboratory in China" in ZYS, which was the first to carry out bearing test research. In the 1970s, the Ministry of Machinery Industry established aerospace bearing laboratory". In the 1980s, the State Development Planning Commission, the State Economic Commission, Commission of Science, Technology and Industry for National Defense and the Air force engineering department, Ministry of Aviation and the Ministry of Machinery Industry jointly determined that the "Aviation Engine Bearing Test Base" was initially established in ZYS during the "Seventh Five-Year Plan" period, carrying out experimental research on the Aviation bearing. In the 1990s, ZYS successively undertook national key projects "high-speed railway simulation bearing test technology research", "automobile bearing simulation test technology research", and carried out test technology research work in the field of civilian special bearings. During the "Twelfth Five-Year Plan" period, ZYS undertook the national "XX bearing foundation research and development conditions construction project", with a total investment of nearly 40 million RMB, a new laboratory covering 2111 square meters, and more than 40 sets of test equipments and CNAS certification.

At present, ZYS laboratory can conduct performance and durability tests on special bearings such as aviation and aerospace engine spindles and bearings, high-speed railway bearings, automobile bearings, and wind power bearings. ZYS laboratory is the third-party special bearing test center with the widest range of bearing tests, the widest test range, the largest number of test items and the most complete test parameters. It is also the maker of military and civilian bearing test standards (GJB 8530-2015, GB/T24607- 2009).

⚙️ Bearing testing machine type



Rolling bearing fatigue life testing machine



Automobile wheel bearing unit simulation test machine



Rolling bearing material contact fatigue testing machine



RET type bearing reliability testing machine



Sealed bearing waterproof testing machine



Bearing grease high temperature high speed testing machine



High-speed axle box bearing testing machine

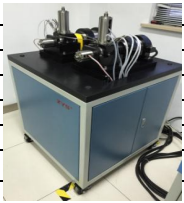








Wind power yaw pitch bearing testing machine



Robot RV reducer bearing testing machine







ZYS Bearing Testing Machine

One		Conventional bearings and parts testing machine series		
1		T2-7N Bearing Testing Machine Purpose: the performance and life test of micro bearing in the inner diameter 2-7mm range are mainly used.	Test type:	Deep groove ball, angular contact ball bearing
			Test inner diameter range:	φ2~φ7mm
			Test number:	2/4/8
			Maximum radial load:	2kN
			Maximum axial load:	1kN
			Maximum test speed:	48000r/min
			Test methods:	Manual spring-loaded, automatic computer control, monitoring and recording.
			Test parameters:	Speed, load, temperature, vibration, motor current, etc.
2		T8-30nf Bearing Testing Machine Purpose: the performance and life test of conventional bearing in the inner diameter 8-30mm range are mainly used.	Test type:	Deep groove ball, angular contact ball, cylindrical roller, tapered roller bearing
			Test inner diameter range:	φ8~φ30mm
			Test number:	2/4
			Maximum radial load:	10kN
			Maximum axial load:	5kN
			Maximum test speed:	24000r/min
			Test methods:	Automatic computer control, monitoring and recording.
			Test parameters:	Speed, load, temperature, vibration, motor current, etc.
3		T20-60nf Bearing Testing Machine Purpose: the performance and life test of conventional bearing in the inner diameter 20-60mm range are mainly used.	Test type:	Deep groove ball, angular contact ball, cylindrical roller, tapered roller bearing
			Test inner diameter range:	φ20~φ60mm
			Test number:	2/4
			Maximum radial load:	100kN
			Maximum axial load:	50kN
			Maximum test speed:	10000r/min
			Test methods:	Automatic computer control, monitoring and recording.
			Test parameters:	Speed, load, temperature, vibration, motor current, etc.
4		T40-80f Bearing Testing Machine Purpose: the performance and life test of conventional bearing in the inner diameter 40-80mm range are mainly used.	Test type:	Deep groove ball, angular contact ball, cylindrical roller, tapered roller bearing
			Test inner diameter range:	φ40~φ80mm
			Test number:	2/4
			Maximum radial load:	200kN
			Maximum axial load:	100kN
			Maximum test speed:	5000r/min
			Test methods:	Automatic computer control, monitoring and recording.
			Test parameters:	Speed, load, temperature, vibration, motor current, etc.
5		T60-120F Bearing Testing Machine Purpose: the performance and life test of conventional bearing in the inner diameter 60-120mm range are mainly used.	Test type:	Deep groove ball, angular contact ball, cylindrical roller, tapered roller bearing
			Test inner diameter range:	φ60~φ120mm
			Test number:	2/4
			Maximum radial load:	300kN
			Maximum axial load:	200kN
			Maximum test speed:	5000r/min
			Test methods:	Automatic computer control, monitoring and recording.
			Test parameters:	Speed, load, temperature, vibration, motor current, etc.
6		T120-180F Bearing Testing Machine Purpose: the performance and life test of conventional bearing in the inner diameter 120-180mm range are mainly used.	Test type:	Deep groove ball, angular contact ball, cylindrical roller, tapered roller bearing.
			Test inner diameter range:	φ120~φ180mm
			Test number:	2/4
			Maximum radial load:	500kN
			Maximum axial load:	300kN
			Maximum test speed:	3000r/min
			Test methods:	Automatic computer control, monitoring and recording.
			Test parameters:	Speed, load, temperature, vibration, motor current, etc.
7		T20-60f Spherical Bearing Testing Machine Purpose: the performance and life test of Spherical bearing in the inner diameter 20-60mm range are mainly used.	Test type:	Spherical bearing
			Test inner diameter range:	φ20~φ60mm
			Test number:	2
			Maximum radial load:	50kN
			Maximum axial load:	/
			Maximum test speed:	5000r/min
			Test methods:	Automatic computer control, monitoring and recording.
			Test parameters:	Speed, load, temperature, vibration, motor current, etc.

8		TSMo10-45n Sealed Bearing Testing Machine of Grease Leakage, Temperature rise and Dustproof		Purpose: the performance test, including grease leakage, Temperature rise and dustproof, of Sealed bearing in the inner diameter 10-45mm range are mainly used.		
		Test type:	Sealed deep groove ball bearing,etc.			
		Test inner diameter range:	φ10~φ45mm			
		Test number:	1/2			
		Maximum radial load:	1kN			
		Dust box speed:	50r/min			
		Maximum test speed:	10000r/min			
9		TSMo5-20N High-speed Sealed Bearing Dustproof Testing Machine		Purpose: the one-sided dustproof performance test of high-speed sealed bearing in the inner diameter of 5-20mm range are mainly used.		
		Test type:	High-speed sealed deep groove ball bearing,etc.			
		Test inner diameter range:	φ5~φ20mm			
		Test number:	1			
		Dust box speed:	20~100r/min			
		Maximum test speed:	60000r/min			
		Bearing Lifting speed time:	10~20s			
10		TSL10-45n Sealed Bearing Fluid-proof Properties Testing Machine		Purpose: the fluid-proof (water, oil and other liquid medium) performance test of sealed bearing in the inner diameter of 10-45mm range are mainly used.		
		Test type:	Sealed deep groove ball bearing,etc.			
		Test inner diameter range:	φ10~φ45mm			
		Test number:	2			
		Maximum radial load:	1kN			
		Medium:	Water, oil, mud, etc.			
		Maximum test speed:	10000r/min			
11		T8-30NT Sealed Bearing High Temperature and High Speed Testing		Purpose: the high temperature and high speed test of sealed bearing in the inner diameter 8-30mm range are mainly used.		
		Test type:	Deep groove, angular contact ball bearing,etc.			
		Test inner diameter range:	φ8~φ30mm			
		Test number:	2			
		Maximum load:	Radial 5kN, axial 2kN			
		Maximum heating temperature:	300℃			
		Maximum test speed:	60000r/min			
12		T10-30nT Bearing Grease Testing Machine		Purpose: the high temperature and high speed test (DIN51521 standards) of bearing grease are mainly used.		
		Test type:	Angular contact ball bearing (7206)			
		Test inner diameter:	10~30mm			
		Test number:	5			
		Test load:	1.5/3.0/4.5kN			
		Test speed:	3000/6000/10000 r/min			
		Heating temperature:	Room temperature~250℃			
13		TPB10-20f Ball Bearing (Steel / Ceramic) Contact Fatigue Testing Machine		Purpose: the contact fatigue test of ball bearing material in the inner diameter 8-30mm range are mainly used.		
		Test type:	Ball bearing (steel / ceramic), thrust piece			
		Test ball diameter range:	φ10~φ20mm			
		Thrust piece size range:	φ35~φ52mm			
		Test number:	1			
		Maximum radial load:	20kN			
		Maximum test speed:	3000r/min			
Two	Automotive bearings and parts testing machine series					
	14		TAUh20-70Tf Automobile Hub Bearing Simulation Testing Machine		Purpose: the dynamic simulation performance and durability test of lightweight hub bearing in the inner diameter 20-70mm range are mainly used.	
Test type:			Hub bearing			
Test inner diameter range:			φ20~φ70mm			
Test number:			1			
Maximum test load:			Radial 20kN, axial ±15kN			
Maximum test speed:			2000r/min			
Heating temperature:			Room temperature~150℃			
Test methods:	Automatic computer control,monitoring and recording.					
Test parameters:	Speed, load, temperature, vibration, motor current, etc.					

15		TAUh50-100Tf Automobile Hub Bearing Simulation Testing Machine		Purpose: the dynamic simulation performance and durability test of heavy hub bearing in the inner diameter 50-100mm range are mainly used.	
		Test type:	Hub bearing		
		Test inner diameter range:	$\phi 50 \sim \phi 100 \text{mm}$		
		Test number:	1		
		Maximum test load:	Radial 50kN, axial $\pm 30 \text{kN}$		
		Maximum test speed:	1500r/min		
		Heating temperature:	Room temperature $\sim 150^{\circ}\text{C}$		
		Test methods:	Automatic computer control, monitoring and recording.		
Test parameters:	Speed, load, temperature, vibration, motor current, etc.				
16		TAUh30-50Tf Automobile Hub Bearing High-temperature Durability Test Machine		Purpose: the performance and durability test in high temperature of hub bearing in the inner diameter 30-50mm range are mainly used.	
		Test type:	Hub bearing		
		Test inner diameter range:	$\phi 30 \sim \phi 50 \text{mm}$		
		Test number:	2		
		Maximum test load:	Radial 15kN, axial $\pm 10 \text{kN}$		
		Maximum test speed:	2000r/min		
		Heating temperature:	Room temperature $\sim 150^{\circ}\text{C}$		
		Test methods:	Automatic computer control, monitoring and recording.		
Test parameters:	Speed, load, temperature, vibration, motor current, etc.				
17		TuhMs30-50f Automobile Hub Bearing Mud / Brine Test Machine		Purpose: the performance and durability test in the mud/brine conditions of hub bearing in the inner diameter 30-50mm range are mainly used.	
		Test type:	Hub bearing		
		Test inner diameter range:	$\phi 30 \sim \phi 50 \text{mm}$		
		Test number:	2		
		Maximum test load:	Radial 15kN, axial $\pm 10 \text{kN}$		
		Maximum test speed:	2000r/min		
		Medium:	Mud / brine		
		Test methods:	Automatic computer control, monitoring and recording.		
Test parameters:	Speed, load, temperature, vibration, motor current, etc.				
18		TAUh30-50fP Automobile Hub Bearing Flange Rotary Fatigue Testing Machine		Purpose: the performance and durability test in the mud/brine conditions of hub bearing in the inner diameter 30-50mm range are mainly used.	
		Test type:	Hub bearing and flanges		
		Test inner diameter range:	$\phi 30 \sim \phi 50 \text{mm}$		
		Test number:	1		
		Combined load:	$\pm 20 \text{kN}$		
		Maximum test speed:	900r/min		
		Test methods:	Automatic computer control, monitoring and recording.		
		Test parameters:	Speed, load, temperature, vibration, motor current, etc.		
19		TAUh30-50f Automobile Hub Bearing Torque Rigidity and Preload Testing Machine		Purpose: the moment rigidity measurement of hub bearing in the inner diameter 30-50mm range are mainly used. Resonance method is used to test the bearing inner and outer ring resonant frequency and damping coefficient, and analysis the bearing pre-load size.	
		Test type:	Hub bearing		
		Test inner diameter range:	$\phi 30 \sim \phi 50 \text{mm}$		
		Test number:	1		
		Maximum test load:	Radial 15kN, axial 10kN		
		Maximum relative inclination:	2°		
		Exciting:	Frequency 3000Hz, exciting force 15kg, amplitude $\pm 5 \text{mm}$		
		Test methods:	Automatic computer control, monitoring and recording.		
Test parameters:	Stiffness, angle, load, Resonant frequency, damping coefficient, etc.				
20		TAUh20-70f Automobile Hub Bearing Friction Torque Testing Machine		Purpose: the static and dynamic friction torque test and comparison test of hub bearing in the inner diameter 20-70mm range are mainly used.	
		Test type:	Hub bearing		
		Test inner diameter range:	$\phi 20 \sim \phi 70 \text{mm}$		
		Test number:	1		
		Maximum radial load:	10kN		
		Friction torque:	5N.m, 10N.m		
		Maximum test speed:	2000r/min		
		Test methods:	Automatic computer control, monitoring and recording.		
Test parameters:	Speed, load, friction torque, etc.				
21		TAC30-50nT Automobile Clutch Release Bearing Simulation Testing Machine		Purpose: the performance and working life test of clutch release bearing in the inner diameter 30-50mm range are mainly used.	
		Test type:	Clutch Release Bearing		
		Test inner diameter range:	$\phi 30 \sim \phi 50 \text{mm}$		
		Test number:	1		
		Clutch frequency:	2Hz		
		Maximum axial load:	1kN		
		Maximum test speed:	10000r/min		
		Test methods:	Automatic computer control, monitoring and recording.		
Test parameters:	Speed, load, temperature, noise, Clutch times, motor current, etc.				

22		TOX20-60F Testing Machine of Automobile Suspension Support Bearing and Components	Purpose: the performance and working life test of support bearing and its components in the inner diameter 20-60mm range are mainly used, with a high temperature tank and mud module.
		Test type:	Support bearing and its components
		Test inner diameter range:	$\phi 20 \sim \phi 60 \text{mm}$
		Test number:	1
		Maximum test load:	Radial 10kN, axial 35kN
		Swing range:	$\pm 45^\circ$
		Test speed:	30~120r/min
		Test methods:	Automatic computer control, monitoring and recording.
Test parameters:	Speed, load, temperature, torque, current, cycles, etc.		
23		TA10-30nT Automobile Water Pump Bearing Testing Machine	Purpose: the performance and life test of water pump bearing in the inner diameter 10-30mm range are mainly used.
		Test type:	Water pump bearing
		Test inner diameter range:	$\phi 10 \sim \phi 30 \text{mm}$
		Test number:	2
		Maximum radial load:	8kN
		Heating temperature:	Room temperature~100℃
		Maximum test speed:	15000r/min
		Test methods:	Automatic computer control, monitoring and recording.
Test parameters:	Speed, load, temperature, vibration, motor current, etc.		
24		TA8-30NT Automobile Generator Bearing Testing Machine	Purpose: the performance and life test of generator bearing in the inner diameter 8-30mm range are mainly used.
		Test type:	Deep groove ball bearing, etc.
		Test inner diameter range:	$\phi 8 \sim \phi 30 \text{mm}$
		Test number:	2
		Maximum test load:	Radial 5kN, axial 3kN
		Heating temperature:	Room temperature~200℃
		Maximum test speed:	36000r/min
		Test methods:	Automatic computer control, monitoring and recording.
Test parameters:	Speed, load, temperature, vibration, motor current, etc.		
25		TA10-100 Automobile Hub Unit ABS Wheel Speed Sensor Testing Machine	Purpose: the performance test of ABS wheel speed sensor of Wheel hub unit in the inner diameter 10-100mm range are mainly used.
		Test type:	ABS wheel speed sensor
		Test inner diameter:	$\phi 10 \sim \phi 100 \text{mm}$
		Test number:	1
		Maximum test speed:	3000r/min
		Test methods:	Automatic computer control, monitoring and recording.
		Active test parameters:	Speed, current, number of teeth, open current and stator current value, duty cycle, etc.
		Passive test parameters:	Speed, current, number of teeth, the output voltage peak, valid value, resistors, etc.
26		TA10-100 Automobile Hub Unit ABS Sensor Dynamic Testing Machine	Purpose: the dynamic simulation performance test of ABS wheel speed sensor of wheel hub unit in the inner diameter 10-100mm range are mainly used.
		Test type:	ABS wheel speed sensor
		Test inner diameter:	$\phi 10 \sim \phi 100 \text{mm}$
		Test number:	2
		Maximum test speed:	3000r/min
		Test methods:	Automatic computer control, monitoring and recording.
		Test parameters:	Speed, current, output voltage signal and the waveform, etc.
		27	
Test type:	Automobile transmission shaft		
Test pieces Length:	0.5~1.5m		
Test number:	1		
Maximum test speed:	7000r/min		
Maximum test torque:	2000N.m		
Test methods:	Automatic computer control, monitoring and recording.		
Test parameters:	Temperature, speed, torque, current, etc.		
<h3>Three Rail transit bearing test machine series</h3>			
28		TRa80-200F Railway Wheel Axle Box Bearing Testing Machine	Purpose: the performance, thermal and endurance test for the locomotive vehicles wheel of class of high speed railway, the subway rail transit to railway axle box bearing in the inner diameter 80-200mm range Can be used.
		Test type:	Railway axle box bearing
		Test inner diameter range:	$\phi 80 \sim \phi 200 \text{mm}$
		Test number:	2
		Maximum test load:	Radial 250kN, axial $\pm 200 \text{kN}$
		Maximum test speed:	3800r/min (550km/h)
		Analog wind speed:	0~180km/h (50m/s)
		Test methods:	Automatic computer control, monitoring and recording.
Test parameters:	Speed, load, temperature, vibration, motor current, etc.		

29	TRa50-160tF Locomotive Traction Motor Bearing Testing Machine	Purpose: the performance test, thermal test, high and low temperature environment simulation tests and durability test for locomotive traction motor bearing of class of high speed railway, the subway rail transit in the inner diameter 50-160mm range can be used.
	Test type:	Traction motor bearing
	Test inner diameter range:	$\phi 50 \sim \phi 160\text{mm}$
	Test number:	1
	Maximum test load:	Gear radial 300kN, rotor radial 100kN, axial 70kN
	Maximum test speed:	10000r/min
	Analog wind speed and temperature:	0~180km/h (50m/s) , -50℃~+50℃
	Test methods:	Automatic computer control, monitoring and recording.
	Test parameters:	Speed, load, temperature, vibration, motor current, etc.
30	TRa100-200F Railway Locomotive Holding Axle Box Bearing Testing Machine	Purpose: the performance and endurance test for holding the axle box bearing of class of high speed railway, the subway rail transit in the inner diameter 100-200mm range can be used.
	Test type:	Holding the axle box bearing
	Test inner diameter range:	$\phi 50 \sim \phi 160\text{mm}$
	Test number:	2
	Maximum test load:	Radial 260kN, axial 100kN
	Maximum test speed:	1500r/min
	Analog wind speed:	0~30km/h
	Test methods:	Automatic computer control, monitoring and recording.
	Test parameters:	Speed, load, temperature, vibration, motor current, etc.
Four	Wind power bearing testing machine series	
31	TWp 1500-3000F Wind Turbine Yaw and Pitch Wheel Bearing Dynamic Simulation Testing Machine	Purpose: the dynamic simulation test of wind turbine yaw and pitch wheel bearing in the inner diameter 100-200mm range are mainly used.
	Test type:	Wind Turbine yaw and pitch wheel bearing
	Test inner diameter range:	$\phi 1500 \sim \phi 3000\text{mm}$
	Test number:	1
	Maximum radial load:	Spindle end 2000 kN, auxiliary shaft end 1000 kN
	Maximum axial load:	1000kN
	Maximum test speed:	1r/min
	Test methods:	Automatic computer control, monitoring and recording.
	Test parameters:	Speed, load, temperature, vibration, torque, motor current, etc.
32	TWp1000-3000F Wind Turbine Yaw and Pitch Wheel Bearing Friction Torque Testing Machine	Purpose: the starting and dynamic friction torque test of wind turbine yaw and pitch wheel bearing in the inner diameter 1000-3000mm range are mainly used.
	Test type:	Wind Turbine yaw and pitch wheel bearing
	Test inner diameter range:	$\phi 1000 \sim \phi 3000\text{mm}$
	Test number:	1
	Maximum test speed:	1r/min
	Friction torque range:	1000N.m×Drive ratio
	Test methods:	Automatic computer control, monitoring and recording.
	Test parameters:	Speed, load, temperature, vibration, torque, motor current, etc.
33	TWp500-800F Megawatt Wind Turbine Gearbox Bearing Testing Machine	Purpose: the performance and durability test of megawatt wind turbine gearbox bearing in the inner diameter 1000-3000mm range are mainly used.
	Test type:	Wind turbine gearbox bearing
	Test inner diameter range:	$\phi 500 \sim \phi 800\text{mm}$
	Test number:	2/4
	Maximum radial load:	1200kN
	Maximum axial load:	200kN
	Maximum test speed:	100r/min
	Test methods:	Automatic computer control, monitoring and recording.
	Test parameters:	Speed, load, temperature, vibration, motor current, etc.
Five	Aerospace bearing test machine series	
34	TDR75-210nTf (ZYS-102) Aeroengine Between Shafts Bearing Double Ferrule Rotation Test Machine	Purpose: the life and performance test of aeroengine between shafts bearing in the inner diameter 75-210mm range are mainly used, test bearing inner and outer rings rotate simultaneously, it can also be used for general aviation engine shaft bearing test.
	Test type:	Between shafts bearing
	Test inner diameter range:	$\phi 75 \sim \phi 180\text{mm}$
	Test number:	1
	Maximum radial load:	30kN
	Oil temperature:	Room temperature~200℃
	Maximum test speed:	18000r/min
	Test methods:	Automatic computer control, monitoring and recording.
	Test parameters:	Speed, load, temperature, vibration, motor current, etc.

35	TAAs40-80NT (ZYS-103) Aerospace Bearing Testing Machine	Purpose: the speeding, overloading, light load slip,oil-break performance and durability test of medium-sized high-speed aviation and aerospace bearing in the inner diameter 40-80mm range are mainly used.																
		<table border="1"> <tbody> <tr> <td>Test type:</td> <td>Aviation, aerospace bearing</td> </tr> <tr> <td>Test inner diameter range:</td> <td>φ40~φ100mm</td> </tr> <tr> <td>Test number:</td> <td>1/2</td> </tr> <tr> <td>Test load:</td> <td>Radial 20kN, axial 10kN</td> </tr> <tr> <td>Oil temperature:</td> <td>Room temperature~200°C</td> </tr> <tr> <td>Maximum test speed:</td> <td>36000r/min</td> </tr> <tr> <td>Test methods:</td> <td>Automatic computer control,monitoring and recording.</td> </tr> <tr> <td>Test parameters:</td> <td>Speed, load, temperature, vibration, motor current, etc.</td> </tr> </tbody> </table>	Test type:	Aviation, aerospace bearing	Test inner diameter range:	φ40~φ100mm	Test number:	1/2	Test load:	Radial 20kN, axial 10kN	Oil temperature:	Room temperature~200°C	Maximum test speed:	36000r/min	Test methods:	Automatic computer control,monitoring and recording.	Test parameters:	Speed, load, temperature, vibration, motor current, etc.
Test type:	Aviation, aerospace bearing																	
Test inner diameter range:	φ40~φ100mm																	
Test number:	1/2																	
Test load:	Radial 20kN, axial 10kN																	
Oil temperature:	Room temperature~200°C																	
Maximum test speed:	36000r/min																	
Test methods:	Automatic computer control,monitoring and recording.																	
Test parameters:	Speed, load, temperature, vibration, motor current, etc.																	
36	TAAs8-50NT (ZYS-103A) Aviation and Aerospace Bearing Testing Machine	Purpose: the testing machine adopts the main structure of simply supported beam. Performance and durability testing of small-sized high-speed aviation and aerospace bearing in the inner diameter 8-50mm range are mainly used.																
		<table border="1"> <tbody> <tr> <td>Test type:</td> <td>Aviation, aerospace bearing</td> </tr> <tr> <td>Test inner diameter range:</td> <td>φ8~φ50mm</td> </tr> <tr> <td>Test number:</td> <td>1/2</td> </tr> <tr> <td>Test load:</td> <td>Radial 10kN, axial 10kN</td> </tr> <tr> <td>Oil temperature:</td> <td>Room temperature~200°C</td> </tr> <tr> <td>Maximum test speed:</td> <td>60000r/min</td> </tr> <tr> <td>Test methods:</td> <td>Automatic computer control,monitoring and recording.</td> </tr> <tr> <td>Test parameters:</td> <td>Speed, load, temperature, vibration, motor current, etc.</td> </tr> </tbody> </table>	Test type:	Aviation, aerospace bearing	Test inner diameter range:	φ8~φ50mm	Test number:	1/2	Test load:	Radial 10kN, axial 10kN	Oil temperature:	Room temperature~200°C	Maximum test speed:	60000r/min	Test methods:	Automatic computer control,monitoring and recording.	Test parameters:	Speed, load, temperature, vibration, motor current, etc.
Test type:	Aviation, aerospace bearing																	
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Test methods:	Automatic computer control,monitoring and recording.																	
Test parameters:	Speed, load, temperature, vibration, motor current, etc.																	
37	TAve70-180nTf (ZYS-104) Aeroengine Spindle Bearing Testing	Purpose: the testing machine can adopt the main structure of simply supported beam or cantilever. Performance and durability test of medium and large aeroengine spindle bearing in the inner diameter																
		<table border="1"> <tbody> <tr> <td>Test type:</td> <td>Aeroengine spindle bearing</td> </tr> <tr> <td>Test inner diameter range:</td> <td>φ70~φ180mm</td> </tr> <tr> <td>Test number:</td> <td>1/2</td> </tr> <tr> <td>Test load:</td> <td>Radial 100kN, axial 50kN</td> </tr> <tr> <td>Oil temperature:</td> <td>Room temperature~200°C</td> </tr> <tr> <td>Maximum test speed:</td> <td>20000r/min</td> </tr> <tr> <td>Test methods:</td> <td>Automatic computer control,monitoring and recording.</td> </tr> <tr> <td>Test parameters:</td> <td>Speed, load, temperature, vibration, motor current, etc.</td> </tr> </tbody> </table>	Test type:	Aeroengine spindle bearing	Test inner diameter range:	φ70~φ180mm	Test number:	1/2	Test load:	Radial 100kN, axial 50kN	Oil temperature:	Room temperature~200°C	Maximum test speed:	20000r/min	Test methods:	Automatic computer control,monitoring and recording.	Test parameters:	Speed, load, temperature, vibration, motor current, etc.
Test type:	Aeroengine spindle bearing																	
Test inner diameter range:	φ70~φ180mm																	
Test number:	1/2																	
Test load:	Radial 100kN, axial 50kN																	
Oil temperature:	Room temperature~200°C																	
Maximum test speed:	20000r/min																	
Test methods:	Automatic computer control,monitoring and recording.																	
Test parameters:	Speed, load, temperature, vibration, motor current, etc.																	
38	TAve50-180nTf Aeroengine Shaft Bearing Testing Machine	Purpose: the testing machine adopts the biaxial main structure, and it can accomplish simultaneously performance and durability test of 5 sets of engine high and low pressure rotor bearing.																
		<table border="1"> <tbody> <tr> <td>Test type:</td> <td>Aeroengine Shaft Bearing</td> </tr> <tr> <td>Test inner diameter range:</td> <td>φ50~φ180mm</td> </tr> <tr> <td>Test number:</td> <td>5</td> </tr> <tr> <td>Test load:</td> <td>Radial 100kN, axial 50kN</td> </tr> <tr> <td>Oil temperature:</td> <td>Room temperature~200°C</td> </tr> <tr> <td>Maximum test speed:</td> <td>18000r/min</td> </tr> <tr> <td>Test methods:</td> <td>Automatic computer control,monitoring and recording.</td> </tr> <tr> <td>Test parameters:</td> <td>Speed, load, temperature, vibration, motor current, etc.</td> </tr> </tbody> </table>	Test type:	Aeroengine Shaft Bearing	Test inner diameter range:	φ50~φ180mm	Test number:	5	Test load:	Radial 100kN, axial 50kN	Oil temperature:	Room temperature~200°C	Maximum test speed:	18000r/min	Test methods:	Automatic computer control,monitoring and recording.	Test parameters:	Speed, load, temperature, vibration, motor current, etc.
Test type:	Aeroengine Shaft Bearing																	
Test inner diameter range:	φ50~φ180mm																	
Test number:	5																	
Test load:	Radial 100kN, axial 50kN																	
Oil temperature:	Room temperature~200°C																	
Maximum test speed:	18000r/min																	
Test methods:	Automatic computer control,monitoring and recording.																	
Test parameters:	Speed, load, temperature, vibration, motor current, etc.																	
39	TAve80-200nTf Aviation Shaft Bearing Testing Machine for Fault Simulation and Analysis	Purpose: the testing machine is with complete turbine bearing and the outer casing of aviation engine main bearing test system, and it can accomplish accelerated life test, pre-failure test and performance test and durability test.																
		<table border="1"> <tbody> <tr> <td>Test type:</td> <td>Aeroengine bearing and casing</td> </tr> <tr> <td>Test inner diameter range:</td> <td>φ80~φ200mm</td> </tr> <tr> <td>Test number:</td> <td>1</td> </tr> <tr> <td>Test load:</td> <td>Radial 20kN</td> </tr> <tr> <td>Oil temperature:</td> <td>Room temperature ~200°C</td> </tr> <tr> <td>Maximum test speed:</td> <td>18000r/min</td> </tr> <tr> <td>Test methods:</td> <td>Automatic computer control,monitoring and recording.</td> </tr> <tr> <td>Test parameters:</td> <td>Speed, load, temperature, vibration, motor current, etc.</td> </tr> </tbody> </table>	Test type:	Aeroengine bearing and casing	Test inner diameter range:	φ80~φ200mm	Test number:	1	Test load:	Radial 20kN	Oil temperature:	Room temperature ~200°C	Maximum test speed:	18000r/min	Test methods:	Automatic computer control,monitoring and recording.	Test parameters:	Speed, load, temperature, vibration, motor current, etc.
Test type:	Aeroengine bearing and casing																	
Test inner diameter range:	φ80~φ200mm																	
Test number:	1																	
Test load:	Radial 20kN																	
Oil temperature:	Room temperature ~200°C																	
Maximum test speed:	18000r/min																	
Test methods:	Automatic computer control,monitoring and recording.																	
Test parameters:	Speed, load, temperature, vibration, motor current, etc.																	
40	TAVK50-120nTf Aviation Bearing Cage Dynamic Performance Testing	Purpose: in a variety of conditions such as high temperature, high-speed, heavy or light load, dynamic performance test of aviation bearing cage in the inner diameter 50-120mm range are mainly used.																
		<table border="1"> <tbody> <tr> <td>Test type:</td> <td>Aerospace bearing</td> </tr> <tr> <td>Test inner diameter range:</td> <td>φ50~φ120mm</td> </tr> <tr> <td>Test number:</td> <td>1</td> </tr> <tr> <td>Test load:</td> <td>Radial 20kN, axial 10kN</td> </tr> <tr> <td>Oil temperature:</td> <td>Room temperature ~100°C</td> </tr> <tr> <td>Maximum test speed:</td> <td>12000r/min</td> </tr> <tr> <td>Test methods:</td> <td>Automatic computer control,monitoring and recording.</td> </tr> <tr> <td>Test parameters:</td> <td>Speed, load, temperature, vibration, current host, cage tilt angle, displacement</td> </tr> </tbody> </table>	Test type:	Aerospace bearing	Test inner diameter range:	φ50~φ120mm	Test number:	1	Test load:	Radial 20kN, axial 10kN	Oil temperature:	Room temperature ~100°C	Maximum test speed:	12000r/min	Test methods:	Automatic computer control,monitoring and recording.	Test parameters:	Speed, load, temperature, vibration, current host, cage tilt angle, displacement
Test type:	Aerospace bearing																	
Test inner diameter range:	φ50~φ120mm																	
Test number:	1																	
Test load:	Radial 20kN, axial 10kN																	
Oil temperature:	Room temperature ~100°C																	
Maximum test speed:	12000r/min																	
Test methods:	Automatic computer control,monitoring and recording.																	
Test parameters:	Speed, load, temperature, vibration, current host, cage tilt angle, displacement																	
41	TAAsG8-30nTf Aviation and Aerospace Grease Lubricated Bearing Test Machine for High Temperature and High Speed	Purpose: in the condition of high temperature and high speed, performance and durability test of small aerospace grease lubricated bearing in the inner diameter 8-30mm range are mainly used.																
		<table border="1"> <tbody> <tr> <td>Test type:</td> <td>Aerospace grease lubricated bearing</td> </tr> <tr> <td>Test inner diameter range:</td> <td>φ8~φ30mm</td> </tr> <tr> <td>Test number:</td> <td>2</td> </tr> <tr> <td>Test load:</td> <td>Radial 10kN, axial 2kN</td> </tr> <tr> <td>Heating temperature:</td> <td>Room temperature ~300°C</td> </tr> <tr> <td>Maximum test speed:</td> <td>60000r/min</td> </tr> <tr> <td>Test methods:</td> <td>Automatic computer control,monitoring and recording.</td> </tr> <tr> <td>Test parameters:</td> <td>Speed, load, temperature, vibration, motor current, etc.</td> </tr> </tbody> </table>	Test type:	Aerospace grease lubricated bearing	Test inner diameter range:	φ8~φ30mm	Test number:	2	Test load:	Radial 10kN, axial 2kN	Heating temperature:	Room temperature ~300°C	Maximum test speed:	60000r/min	Test methods:	Automatic computer control,monitoring and recording.	Test parameters:	Speed, load, temperature, vibration, motor current, etc.
Test type:	Aerospace grease lubricated bearing																	
Test inner diameter range:	φ8~φ30mm																	
Test number:	2																	
Test load:	Radial 10kN, axial 2kN																	
Heating temperature:	Room temperature ~300°C																	
Maximum test speed:	60000r/min																	
Test methods:	Automatic computer control,monitoring and recording.																	
Test parameters:	Speed, load, temperature, vibration, motor current, etc.																	

42	TAAs8-30Nft Aviation and Aerospace Bearing Testing Machine for Low Temperature and High Speed	Purpose: at low temperatures, high-speed start-up performance and durability test of aviation and aerospace bearing in the inner diameter 8-30mm range are mainly used.	
		Test type:	Aviation, aerospace bearing
		Test inner diameter range:	$\phi 8 \sim \phi 30\text{mm}$
		Test number:	2
		Test load:	Radial 5kN, axial 5kN
		Ambient temperature:	Room temperature $\sim -50^{\circ}\text{C}$
		Maximum test speed:	60000r/min
		Test methods:	Automatic computer control, monitoring and recording.
	Test parameters:	Speed, load, temperature, vibration, motor current, etc.	
43	TAs2-7NT Aerospace Miniature Bearing Ultra-high Speed Testing Machine	Purpose: the performance and durability test of aerospace miniature bearing in the inner diameter 2-7mm range are mainly used.	
		Test type:	Aerospace miniature bearing
		Test inner diameter range:	$\phi 2 \sim \phi 7\text{mm}$
		Test number:	1
		Test load:	Radial 50N, axial 50N
		Heating temperature:	Room temperature $\sim 100^{\circ}\text{C}$
		Maximum test speed:	120000r/min
		Test methods:	Automatic computer control, monitoring and recording.
	Test parameters:	Speed, load, temperature, vibration, motor current, etc.	
44	TAsA8-25N Aerospace Gyroscope Gas Dynamic Pressure Bearing Testing Machine	Purpose: the performance test of aerospace gyroscope gas dynamic pressure bearing in the test bearing spherical diameter 8-25mm range are mainly used.	
		Test type:	Aerospace gas dynamic pressure bearing
		Spherical diameter range:	$\phi 8 \sim \phi 25\text{mm}$
		Test number:	1
		Test load:	Axial 25N
		Displacement measurement error:	$\leq 0.0001\text{mm}$
		Maximum test speed:	$\pm 40000\text{r/min}$
		Test methods:	Automatic computer control, monitoring and recording.
	Test parameters:	Speed, load, temperature, vibration, motor current, etc.	
45	TASV30-80 Vacuum Simulation Test Bench for Aerospace Meteorological Satellite Scanning Mechanism Bearing	Purpose: in a vacuum environment, performance and durability test of aerospace meteorological satellite scanning mechanism bearing in the inner diameter 30-80mm range are mainly used.	
		Test type:	Angular contact, deep groove ball bearing
		Spherical diameter range:	$\phi 30 \sim \phi 80\text{mm}$
		Test number:	16
		Test load:	Axial preload 0 \sim 500N
		Motion conditions:	Rotation 300r/min, swing 0.1 $^{\circ}$ /s \sim 20 $^{\circ}$ /s, swing angle -20 $^{\circ}$ \sim +20 $^{\circ}$
		Environmental conditions:	Vacuum degree $1 \times 10^{-4}\text{Pa}$, temperature at room temperature $\sim 50^{\circ}\text{C}$
		Friction torque test:	Range $\leq 0.5\text{N.m}$, sensitivity $\leq 0.005\text{N.m}$
		Test methods:	Automatic computer control, monitoring and recording.
	Test parameters:	Speed, swing speed, friction torque, load, motor current, temperature, etc.	
46	TAsMs10-20NP Aerospace Aqueous Medium Bearing Testing Machine	Purpose: the simulation test of aqueous medium bearing in the inner diameter 10-20mm range in the aquatic environment (instead of analog liquid hydrogen, liquid oxygen environment) are mainly used. The test is in accordance with the load spectrum, velocity spectrum.	
		Test type:	Aerospace bearing
		Test diameter range:	$\phi 10 \sim \phi 20\text{mm}$
		Test number:	2
		Test load:	Axial 1.5kN, radial 3kN
		Feed water pressure:	$\leq 2\text{MPa}$
		Maximum test speed:	65000r/min
		Test methods:	Automatic computer control, monitoring and recording.
	Test parameters:	Speed, load, temperature, vibration, Water pressure, motor current, etc.	
47	TAsNm8-30N Aerospace Guidance Systems Non-magnetic Bearing Testing Machine	Purpose: the performance and durability test of aerospace guidance systems non-magnetic bearing in the inner diameter 8-30mm range are mainly used.	
		Test type:	Aerospace bearing
		Test diameter range:	$\phi 8 \sim \phi 30\text{mm}$
		Test number:	2
		Test load:	Axial 1kN, radial 1kN
		Maximum test speed:	36000r/min
		Test methods:	Spring Loaded, automatic computer control, monitoring and recording.
		Test parameters:	Speed, load, temperature, vibration, motor current, etc.