

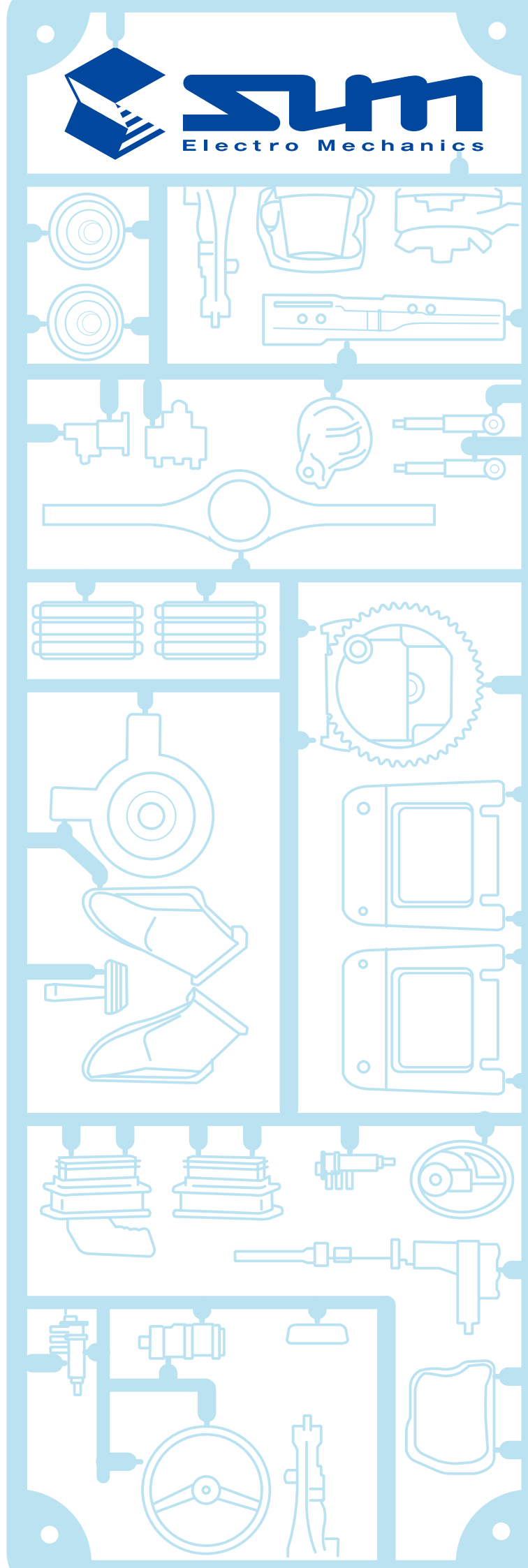


SUM
Electro Mechanics

TEST MACHINE FOR AUTOMOBILE

汽车用试验装置 综合产品目录

AND
A&D Company Limited



Nothing less than the Safty Security

安全

舒适

SUM 电子机械作为汽车，汽车零部件用耐久试验机厂家，今后会持续为客户提供最需要的产品。21 世纪被称为环境世纪，汽车厂家为了提高燃油经济性以及资源重复利用等，对耐久试验机的要求也越来越多。SUM 电子机械的使命就是“帮助客户实现梦想”。

SUM Electro Mechanics is dedicated to offer our automotive customers precisely what they require for their Endurance Test Machines, matching exactly what is needed for the 21st Century where the environmental demands clearly focus on fuel-efficiency, greater material recycling, durability and reliability.

and Well-being of the Environment.

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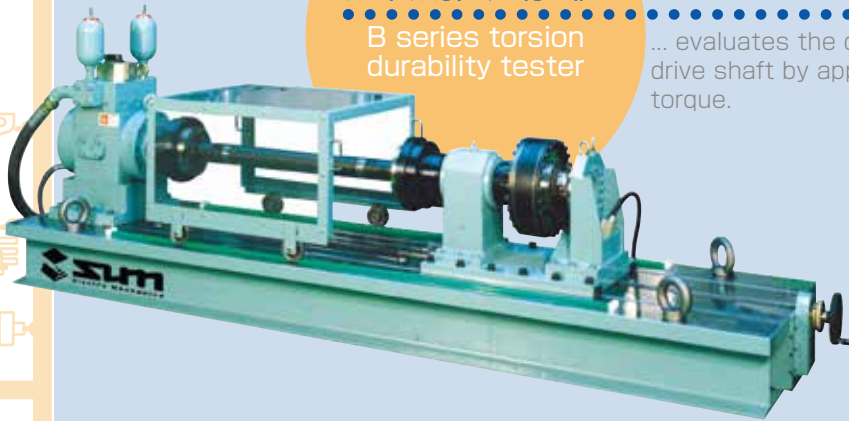
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B 系列 扭转耐久试验机

B series torsion
durability tester

向驱动轴施加动态扭矩负荷，
从而评价耐久性的试验装置。

... evaluates the durability of the
drive shaft by applying dynamic
torque.

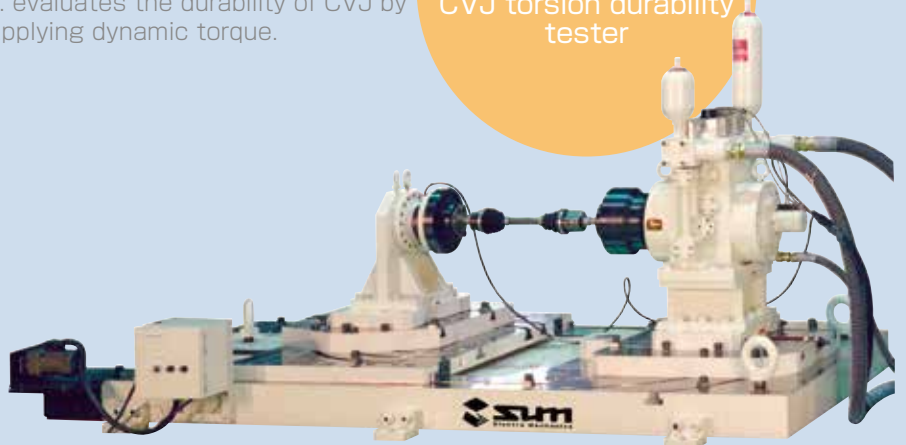


向等速万向节 (CVJ) 施加动态
扭矩负荷，评价耐久性。

... evaluates the durability of CVJ by
applying dynamic torque.

CVJ 扭转 耐久试验机

CVJ torsion durability
tester

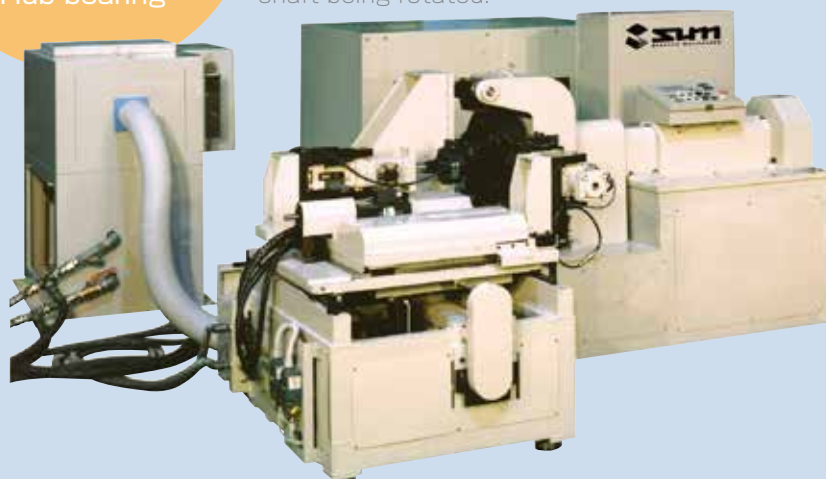


轮毂轴承 旋转弯曲 耐久试验机

Rotational bending
durability tester for
Hub bearing

在旋转驱动轴的同时，对轮胎接地点施加动态上下
负荷·横负荷，从而评价轮毂轴承耐久性的试验装置。

... evaluates the durability of hub bearing by applying
dynamic vertical loads and side forces with the drive
shaft being rotated.



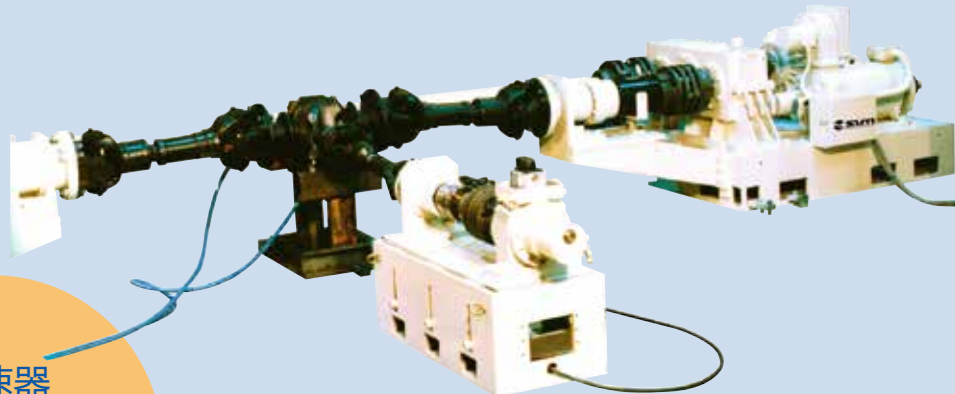


离合器动态 滞后测试仪

Clutch dynamic
hysteresis tester

再现实车发动机的旋转变动，对离合器的动态迟滞特性进行评价。

... evaluates the dynamic hysteresis of the clutch disk by recreating engine rotational fluctuation.



差速器 性能试验机

Differential gear
performance tester

一边旋转差速器一边施加扭矩负荷，评价效率及耐久性的试验装置。

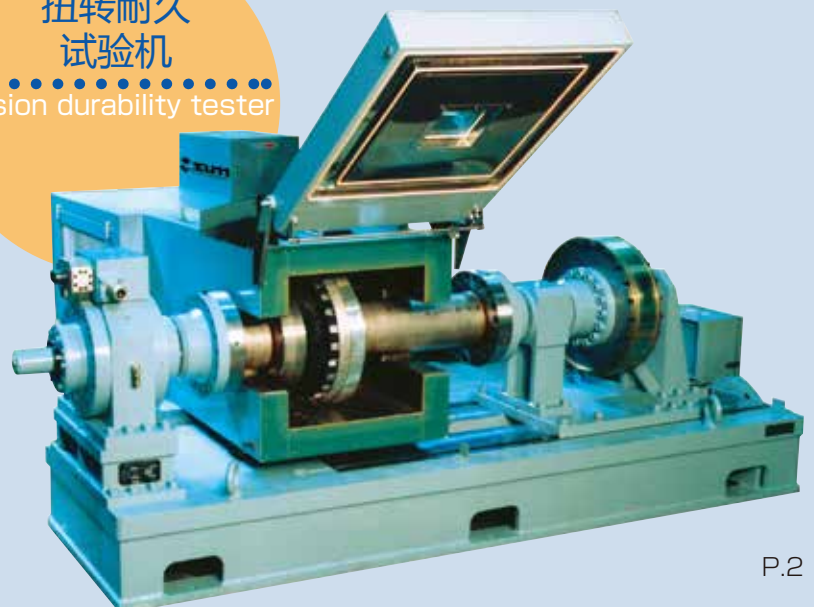
... evaluates the efficiency and durability of the differential gear by applying dynamic torque with the differential gear being rotated.

对连接器等施加动态扭矩负荷，评价耐久性的试验装置。

... evaluates the durability of the coupling by applying dynamic torque.

扭转耐久 试验机

Torsion durability tester

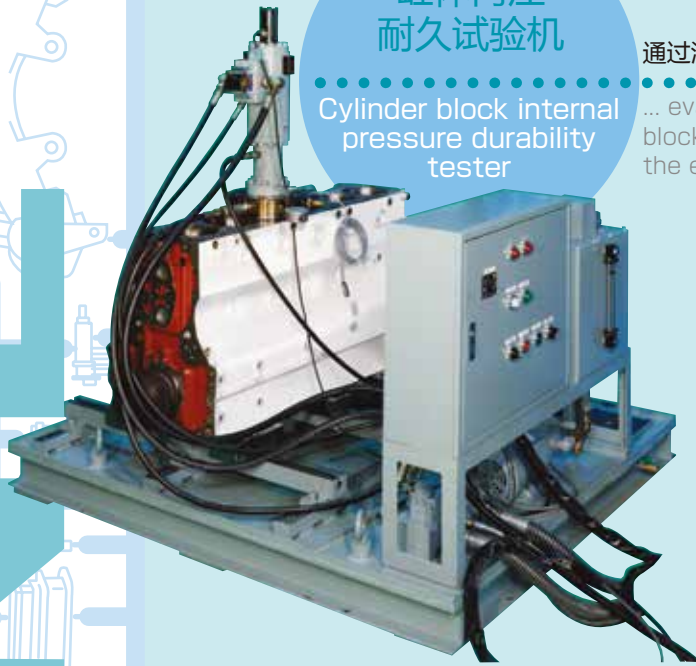


缸体内压 耐久试验机

Cylinder block internal
pressure durability
tester

通过液压模拟发动机的燃烧核动力，评价缸体的强度。

... evaluates the durability of the cylinder block by recreating combustion pressure of the engine.

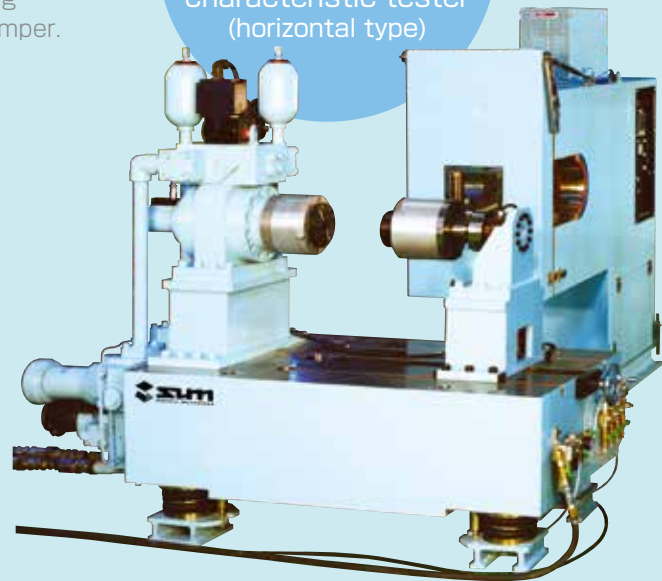


自动测量扭振减震的扭转固有振动数量，
还可进行共振点追踪耐久试验。

... measures the torsion natural frequency, and
also evaluates the durability chasing
resonance point of the torsional damper.

扭振减震器 特性试验机（横型）

Torsional damper
characteristic tester
(horizontal type)

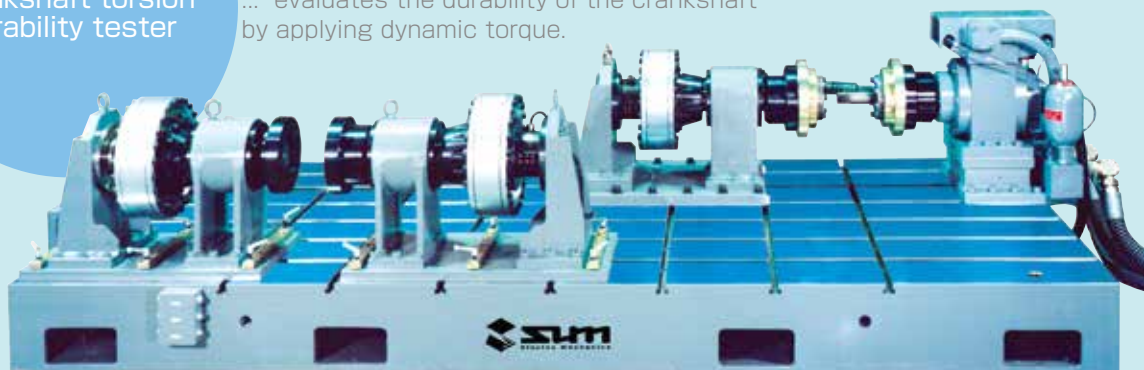


曲轴扭转耐久 试验机

Crankshaft torsion
durability tester

向曲轴施加动态扭矩负荷，评价耐久性能。

... evaluates the durability of the crankshaft
by applying dynamic torque.



自动测量扭振减震的扭转固有振动数量。
立式构造，易于拆卸。

... measures the torsion natural frequency, and also evaluates the durability chasing resonance point of the torsional damper.

扭振减震器 特性试验机 (立式)

Torsional damper
characteristic tester
(vertical type)

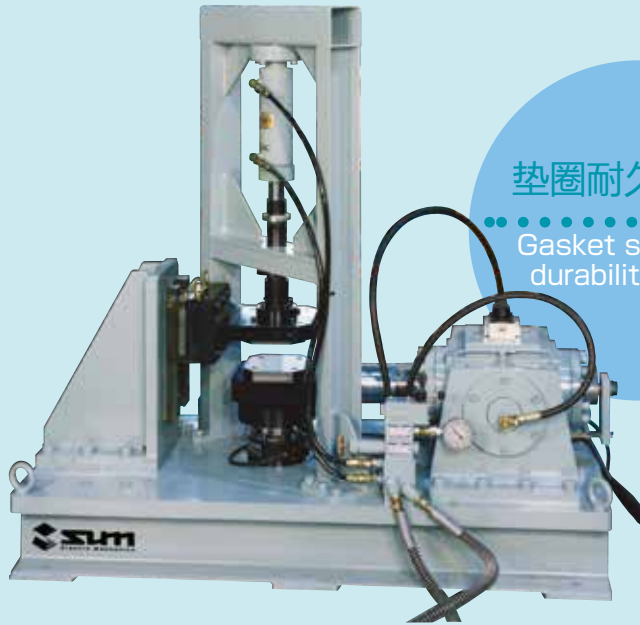


垫圈耐久试验机

Gasket side force
durability tester

通过耐久试验，评价垫圈材反复滑动造成的材料破损等。

... evaluates the durability of the gasket materials by applying dynamic side force and loading vertical static force.



活塞疲劳 试验机

Piston internal
pressure
fatigue tester

将发动机用活塞顶部及连杆侧设置为高温状态，高速循环高压油，评价负荷耐久的试验装置。

... evaluates durability of automobile pistons by applying high-temperature-and-high-pressure oil in a high frequency of engine equivalency.



一边旋转汽车盘式制动器的盘侧，一边施加
扭矩负荷，评价阻力扭矩特性。

... evaluates the drag torque
characteristic of the brake disc by
applying rotational torque.

制动阻力试验机

Brake drag torque
characteristic
tester



主缸特性试验机

Master cylinder
characteristic
tester

测量制动主缸的推力、液压等特性的装置。

... measures characteristic of the
brake master cylinder such as the
driving force and hydraulic pressure.

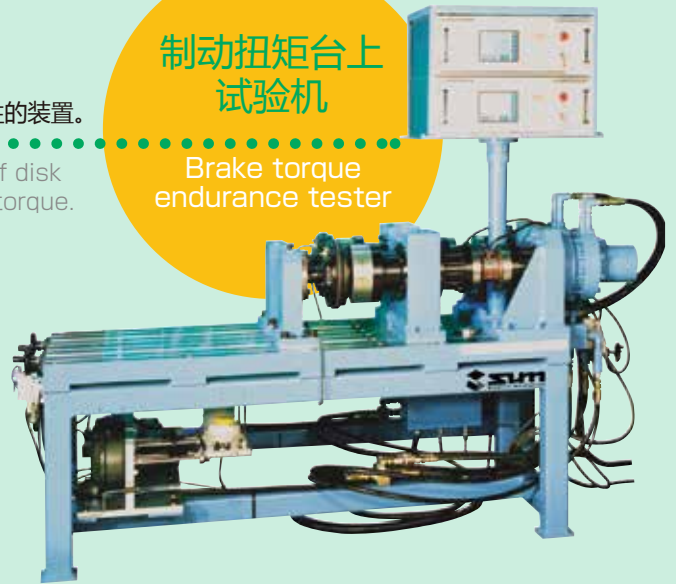


评价盘式制动器动态扭矩耐久性的装置。

... evaluates the durability of disk brake by applying dynamic torque.

制动扭矩台上 试验机

Brake torque
endurance tester



制动软管 弯曲摇动试验机

Brake hose
wind & rock tester

向制动软管中施加内压，同时施加扭转并摇动负荷，评价耐久性。

... applies twist and vertical vibration for brake hose being applied internal pressure and evaluates the durability of brake hose.



卡车用鼓式 制动器强度 耐久试验机

Brake drum
durability tester

向卡车·公用汽车鼓式制动器施加动态扭矩负荷，评价耐久特性。

... evaluates the durability of drum brake for truck and bus by applying dynamic torque.

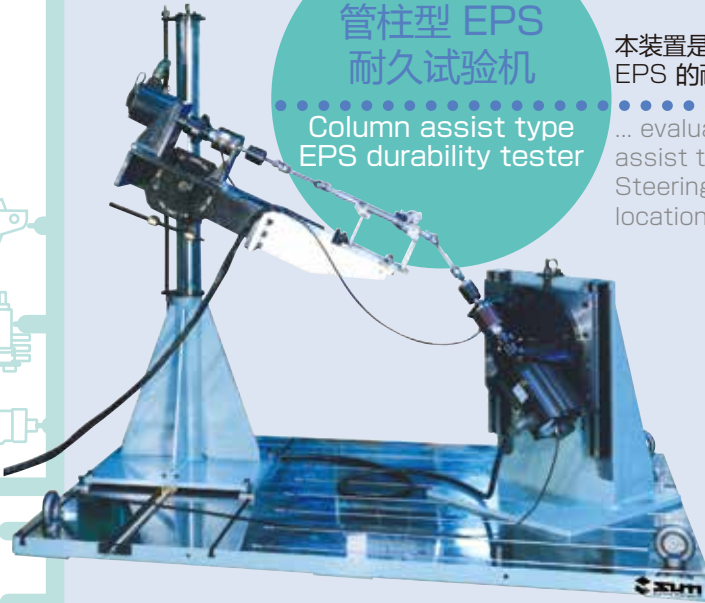


管柱型 EPS 耐久试验机

Column assist type
EPS durability tester

本装置是在实车安装的状态下，评价管柱型 EPS 的耐久试验。

... evaluates durability of the column assist type EPS (Electric Power Steering) being installed on the near location to the real car.



本设备是评价 HPS (液压助力转向) 泵耐久性能的试验装置。

... evaluates durability and performance of the HPS (Hydraulic Power Steering) pump.

HPS 泵耐久 试验机

HPS pump
durability tester



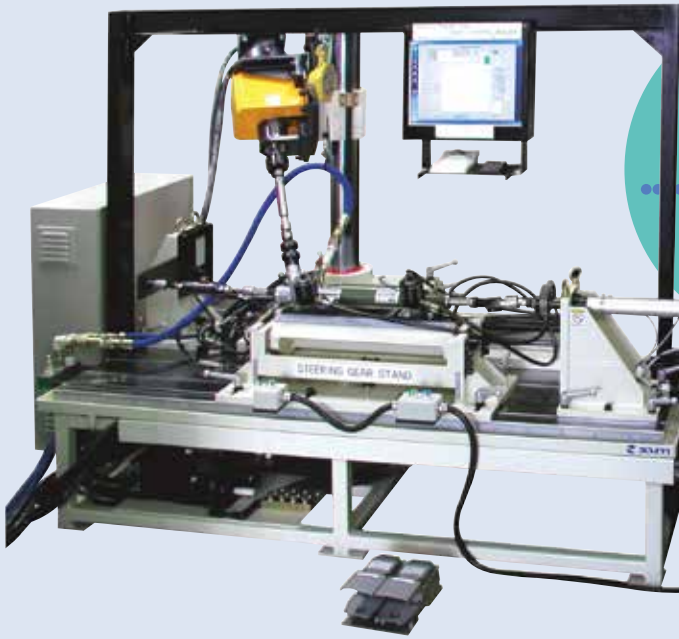
R&P 助力转向器 齿轮箱耐久 试验机

R&P power steering
gear box durability
tester

本装置可对 R&P 助力转向器的齿轮箱实施耐久试验。

... evaluates durability of R&P (Rack and Pinion) power steering gearbox.





R&P
液压助力转向
特性试验机

R&P hydraulic
power steering
characteristic
tester

测量 R&P 液压助力转向的静态输入扭矩，输出负荷，液压特性的装置。

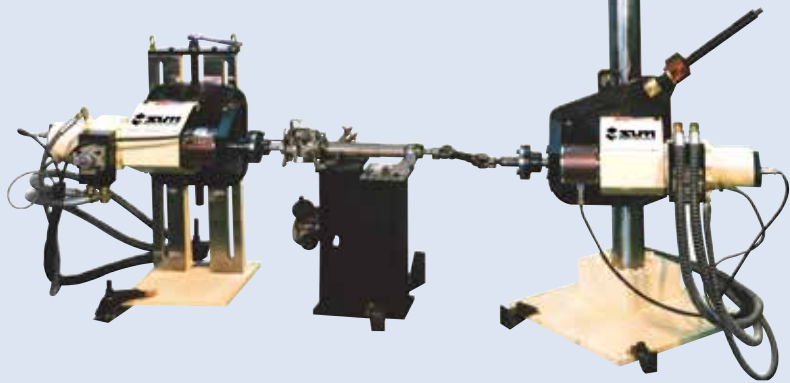
... measures the static input torque, output force and hydraulic pressure characteristic of the R&P hydraulic power steering.

本设备是实施管柱型 EPS 耐久试验的装置。

... evaluates durability of the column assist type EPS (Electric Power Steering)

管柱轴 EPS
耐久试验机

Column assist
type
EPS Durability
tester

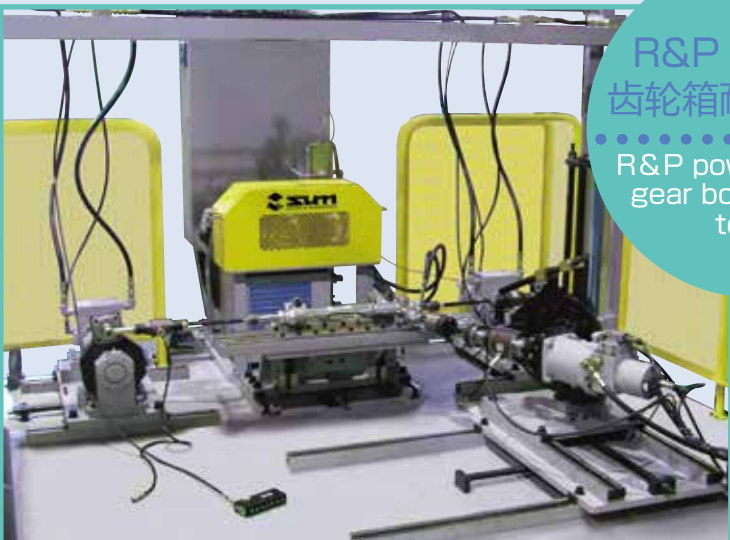


R&P 助力转向
齿轮箱耐久试验机

R&P power steering
gear box durability
tester

本设备可实施 R&P 助力转向齿轮箱的耐久试验。

... evaluates durability of R&P (Rack and Pinion) power steering gearbox.



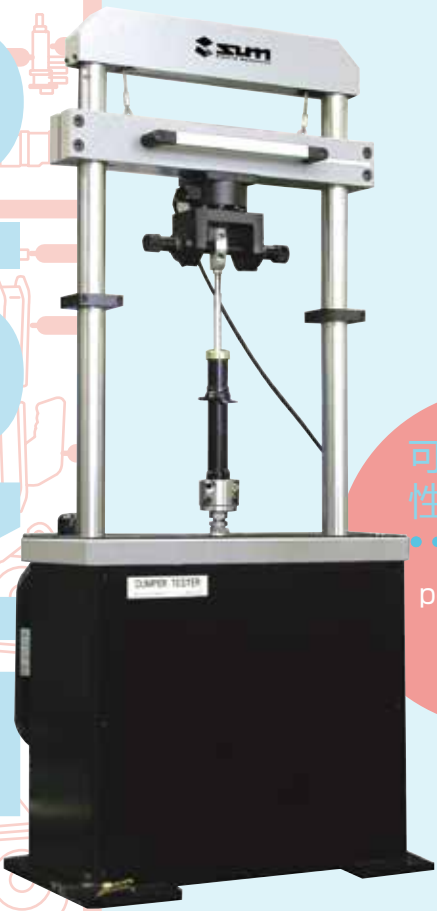
NOISE TESTS

评价减震调整动态特性的试验装置。

... evaluates the performance of the shock absorber by applying high-speed.

高速减震性能试验机

High speed shock absorber performance tester



可移式减震性能试验机

Portable performance tester

是可以搭载在车辆等上的可移式液压减震型，气压减震型性能试验机，可自动判断结果合格与否。

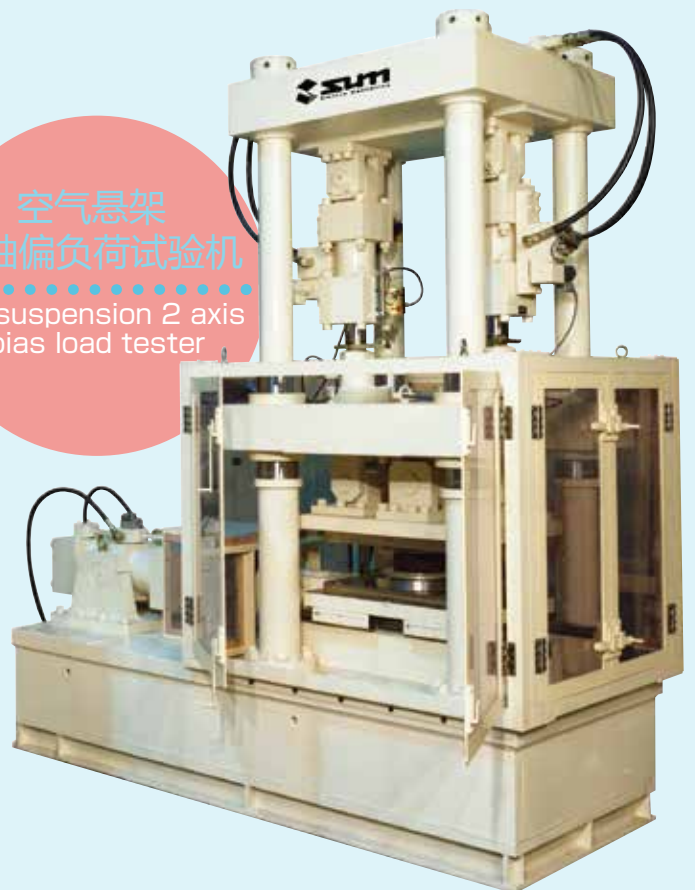
... evaluates the characteristic of the oil damper and gas damper, and automatically checks quality of them.

向空气悬架施加 2 轴偏负荷，评价耐久性能。

... evaluates the durability of the air suspension by applying 2 axis bias loads.

空气悬架 2 轴偏负荷试验机

Air suspension 2 axis bias load tester





液压减震 性能试验机

Oil damper
performance tester

在液压减震，气压减震的正常速度下进行性能试验，然后自动判断结果合格与否的试验装置。

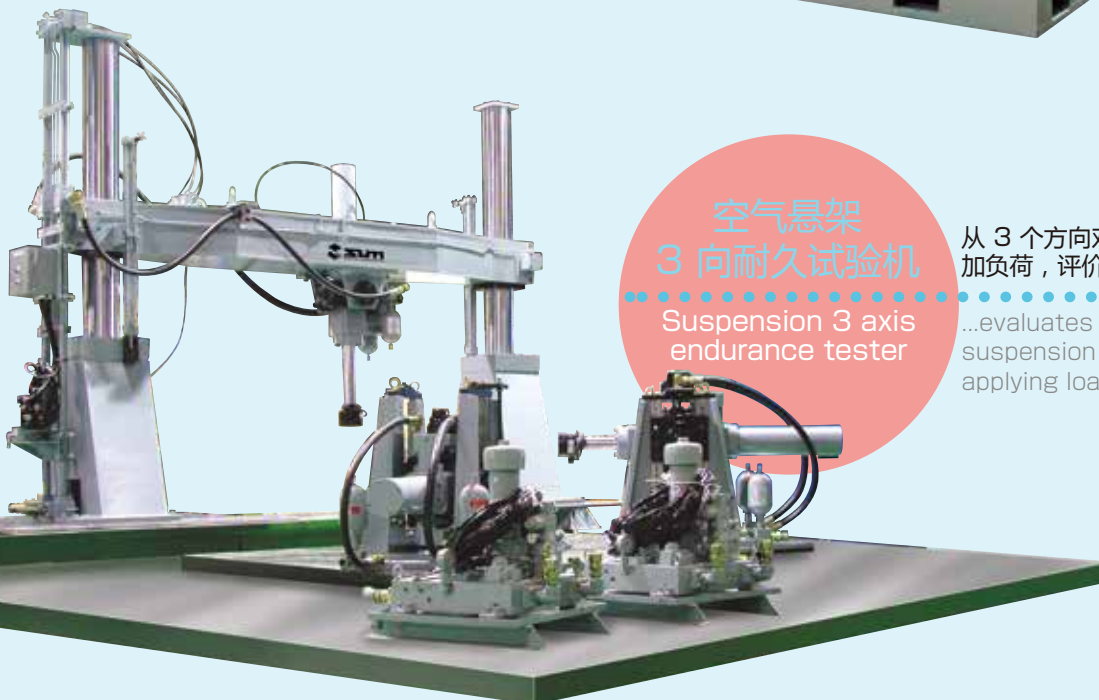
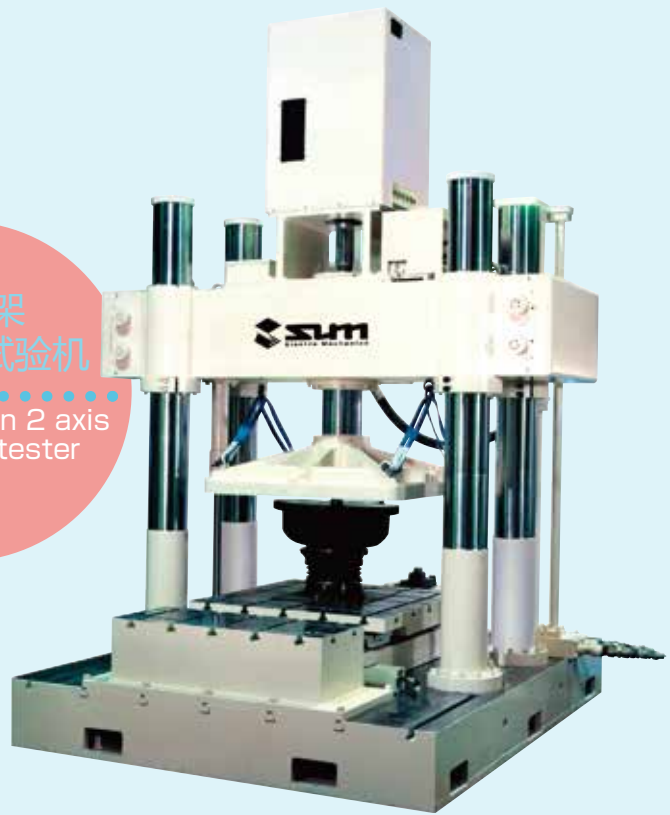
... evaluates the characteristics of the oil damper and gas damper by normal speed, and automatically checks quality of them.

向空气悬架施加 2 轴负荷，评价耐久性能的装置。

... evaluates the durability of the air suspension by applying 2 axis loads.

空气悬架 2 轴负荷试验机

Air suspension 2 axis
endurance tester



空气悬架 3 向耐久试验机

Suspension 3 axis
endurance tester

从 3 个方向对空气悬架的零部件施加负荷，评价耐久特性的试验装置。

...evaluates the durability of the suspension assembly by applying loads to 3 directions.

软管脉动试验机

Hose pulsation tester

在 PS 软管流动油的同时，施加高频脉动，然后测量管道衰减特性的装置。

... applies high frequency dynamic pressure to PS hose while the oil flow in the hose, and measures attenuation characteristic of the hose.



在环境温度下，在水管内施加冲击压力，评价管道的耐久性能。

... evaluates durability of the water hose by applying impact pressure.

水管冲击测试试验机

Water hose impulse tester



制动管弯曲摇动试验机

Brake hose impulse tester with vibrator

在环境温度下，弯曲制动管一端，在内部断续变换压力，振动另一端，评价耐久性能的试验装置。

... applies dynamic pressure while bending one end of the hose, and vibrating the other end of the hose, and evaluates the endurance.



在环境温度下，在矿物油管道内施加冲击压力，评价管道耐久性能的试验装置。

... evaluates durability of the mineral oil hose by applying impact pressure.

矿物油用管道冲击测试试验机

Mineral oil hose impulse tester



PS 管道冲击测试试验机

PS Hose impulse tester with vibrator

在环境温度下，在 PS 管道内反复施加压力，同时上下振动，然后评价耐久性能的试验装置。

... evaluates the endurance of the PS hose by applying dynamic pressure and vertical vibration.

在环境温度下，一边振动扭矩变换器用管道的一端，一边施加冲击压力，评价管道耐久性能的试验装置。

... evaluates the durability of the hose by applies dynamic pressure and vertical vibration to the end of hose.

扭矩变换用管道振动冲击测试试验机

Torque converter hose impulse tester

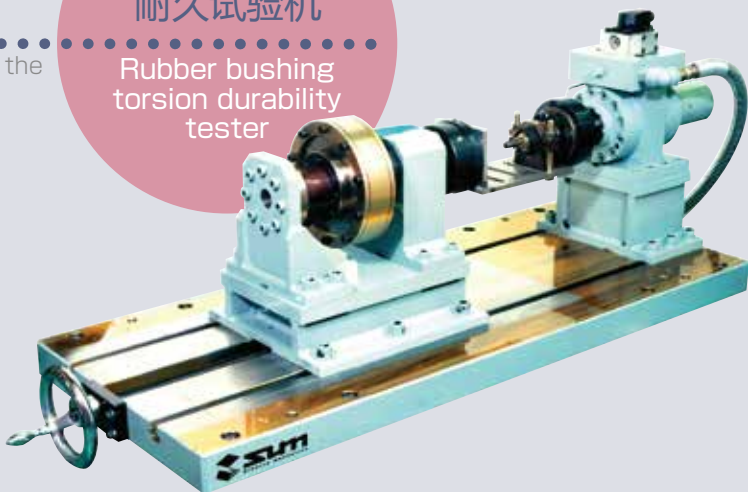


向橡胶套管施加动态扭矩负荷，
评价耐久性能的试验装置。

... evaluates the durability of the
rubber bushing by applying
dynamic torque.

橡胶套管扭转 耐久试验机

Rubber bushing
torsion durability
tester



防震橡胶动 态弹簧检查 设备

Rubber isolator
dynamic spring
inspection
machine

在防震橡胶生产线的最终工序，测量
动态特性并进行自动判定的检查机器。

... measures the dynamic spring
number of the rubber isolator,
and automatically checks the quality.

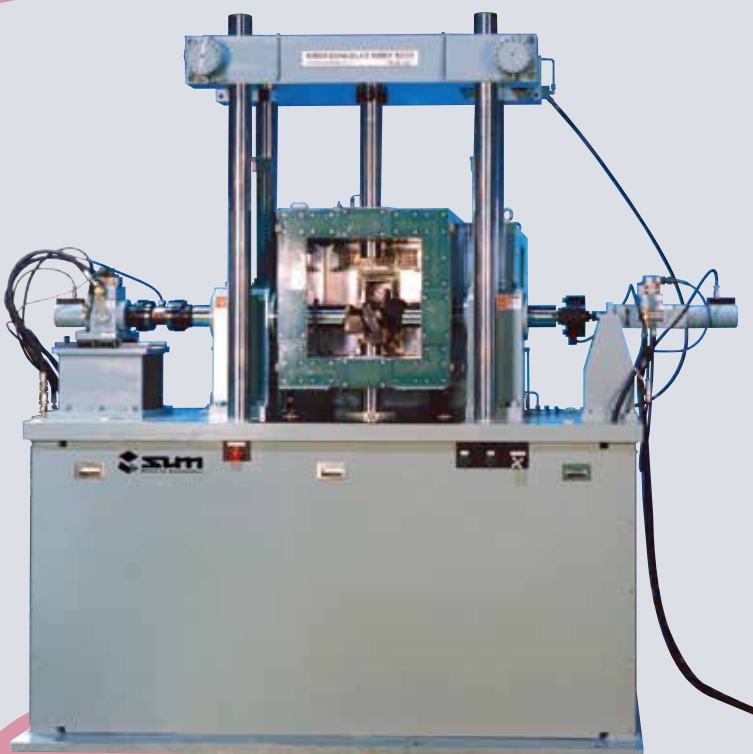


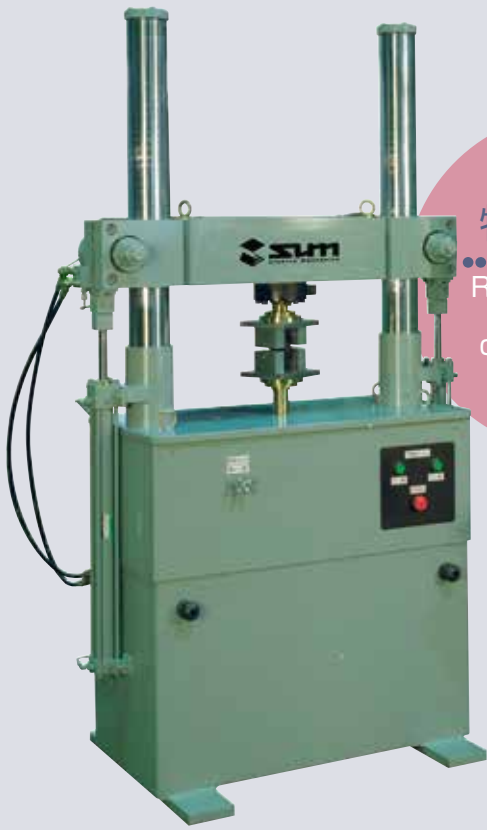
向橡胶套管同时施加，径向负荷，
轴向负荷，扭矩 3 种负荷，评价
耐久性能的试验装置。

... evaluates durability of rubber
bushing by applying loads to
3 directions.

橡胶套管 3 轴耐久试验机

Rubber bushing
3 axis endurance
tester





防震橡胶
特性试验机

Rubber isolator
dynamic
characteristic
tester

在防震橡胶高频振动时，评价动态特性的评价装置。

... evaluates the dynamic characteristic of rubber isolator with high frequency vibration.

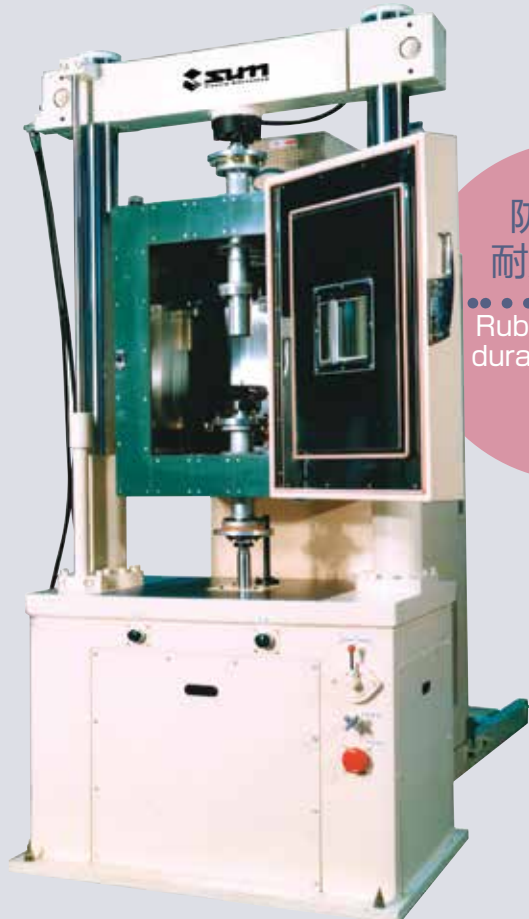


橡胶套圈
复合试验机

Rubber
bushing tester

向橡胶套圈同时施加扭转及径向负荷，评价耐久性能的试验装置。

... evaluates durability of rubber bushing by applying torsion and radial loads.



防震橡胶
耐久试验机

Rubber isolator
durability tester

在环境温度下，向防震橡胶施加动态负荷，评价耐久性能。

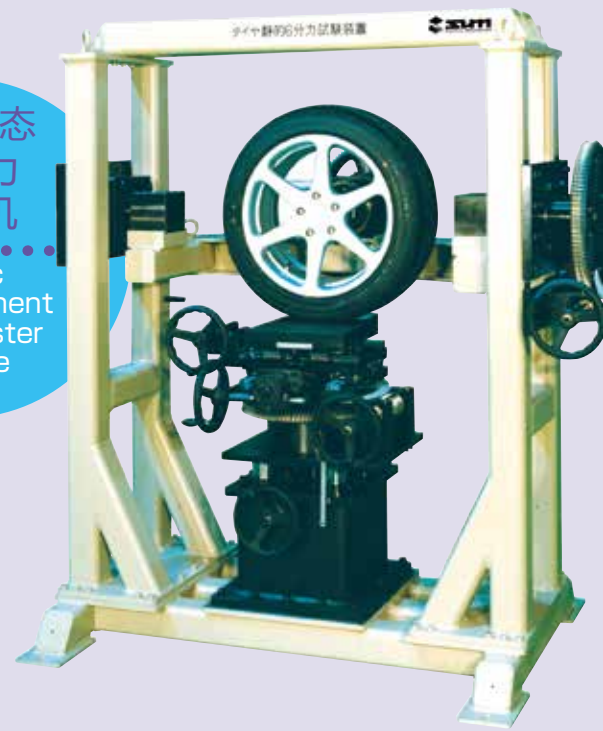
... evaluates the durability of rubber isolator by applying dynamic loads.

可分别向轮胎施加独立静态6分力的试验装置。

... evaluate the characteristic of the tire by applying static 6 component force.

轮胎静态6分力试验机

Static 6 component force tester for Tire



3连液压疲劳试验机

Triple actuator fatigue tester

主机中配置有3个往复运动气缸，可分别使用不同的条件对3个气缸进行疲劳试验。

... has three actuators in the frame, and evaluates fatigue of three test pieces by each test condition at the same time.

在座椅上装载假人重量，进行上下及水平振动，评价耐久性能及特性的试验装置。

... evaluates endurance and characteristic of the automotive seat by applying horizontal and vertical vibration.

2轴座椅振动试验机

Seat vibration tester (2axis)

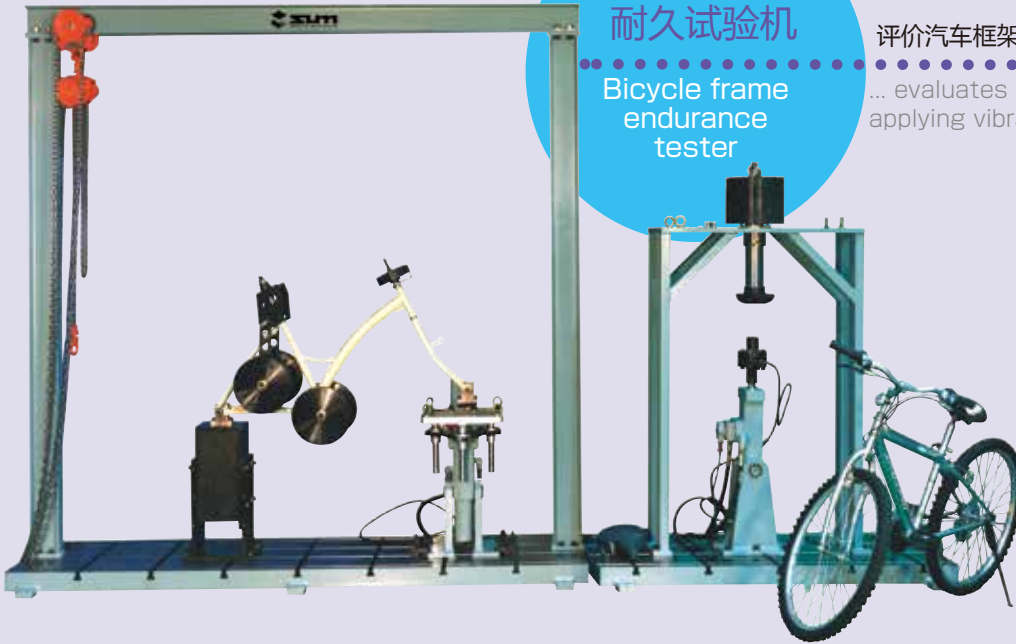


汽车零部件 耐久试验机

评价汽车框架耐震性能的试验机器。

Bicycle frame
endurance
tester

... evaluates durability of bicycle frame by
applying vibration on the end of the frame.

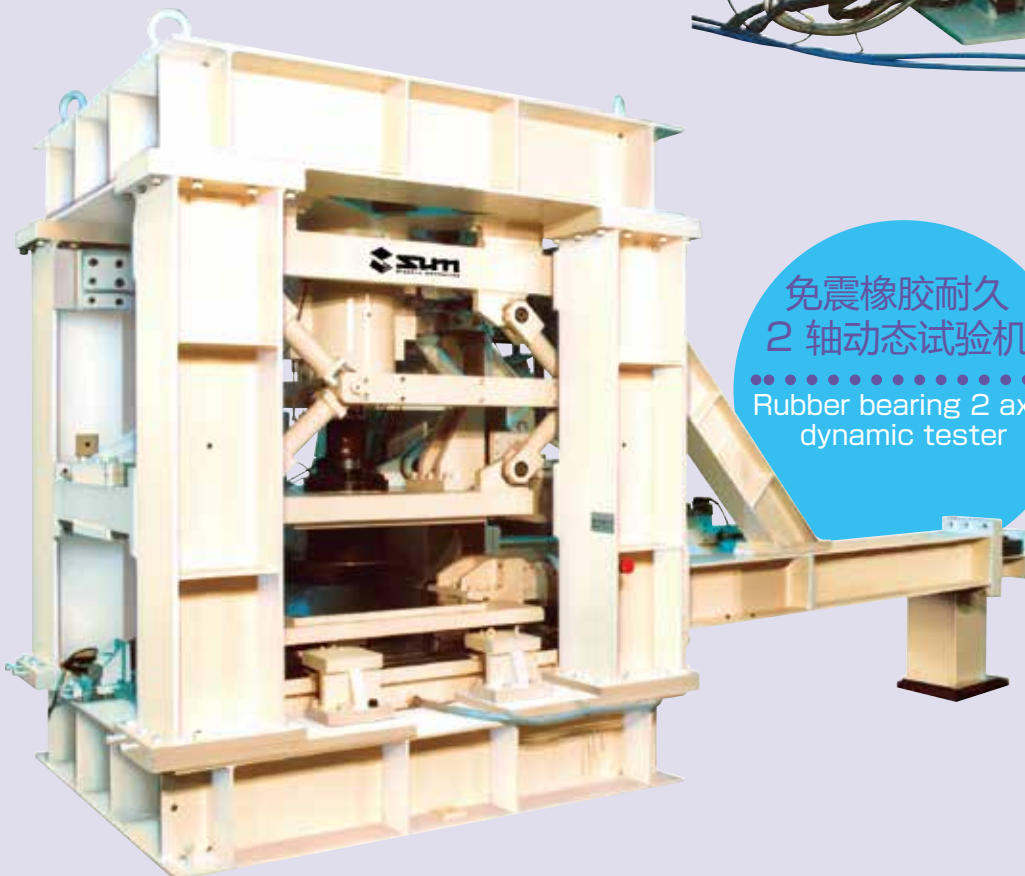
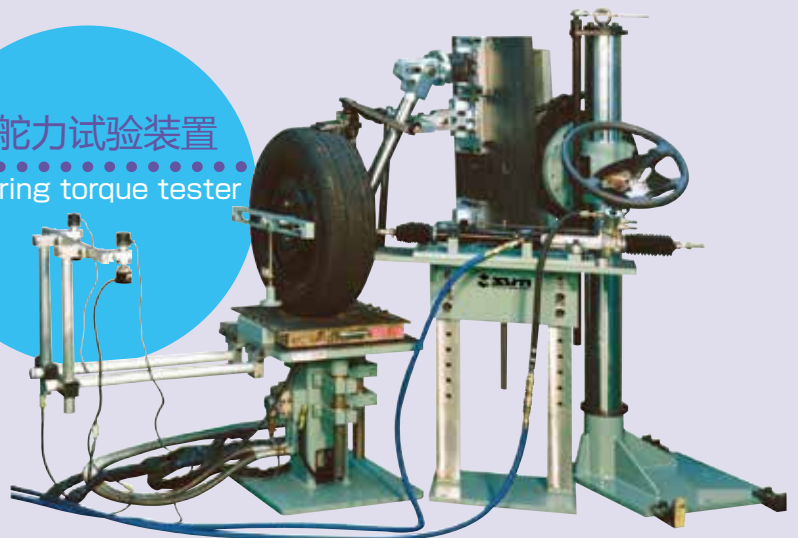


根据 FF 车的轮胎对中变化，测量操舵力变化的测量装置。

... measures change of the steering
torque by change of wheel alignment
for FF type car.

操舵力试验装置

Steering torque tester

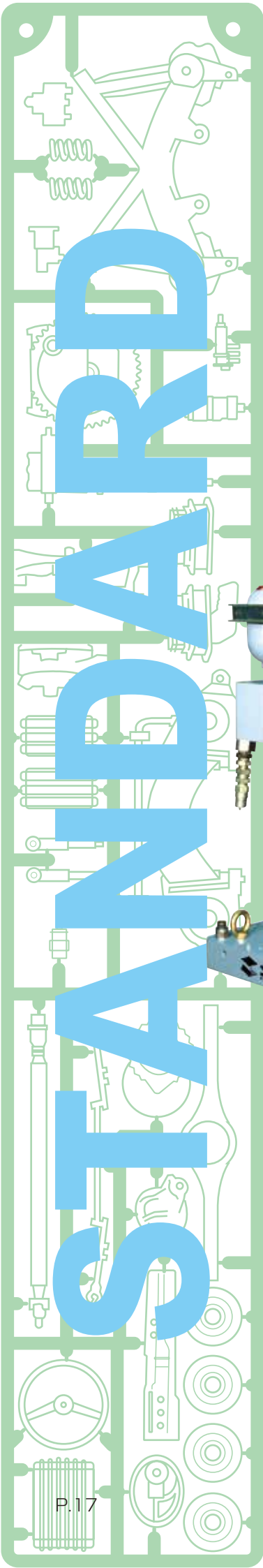


免震橡胶耐久 2 轴动态试验机

向免震橡胶同时施加垂直负荷、
水平负荷，然后解析动态特性的
试验装置。

Rubber bearing 2 axis
dynamic tester

... measures the dynamic
characteristic of the rubber
bushing by applying loads to
vertical and horizontal
directions.



测量滑轮减震高频共振的仪器。

... measures the resonance frequency of pulley damper with high frequency vibration.

高频扭转 共振试验机

Pulley damper
resonance
frequency
tester



4 轴负载 模拟装置

4 Axis
road simulator

可通过对汽车 4 轮分别进行上下加振，评价驾乘舒适度及耐久性能的试验装置。

... evaluates driving feeling and durability of the vehicle by applying vertical vibration for automotive wheels.

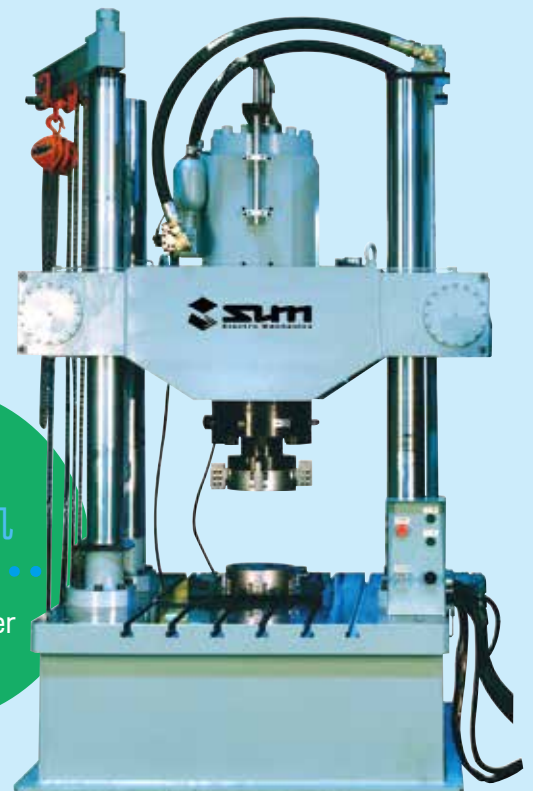


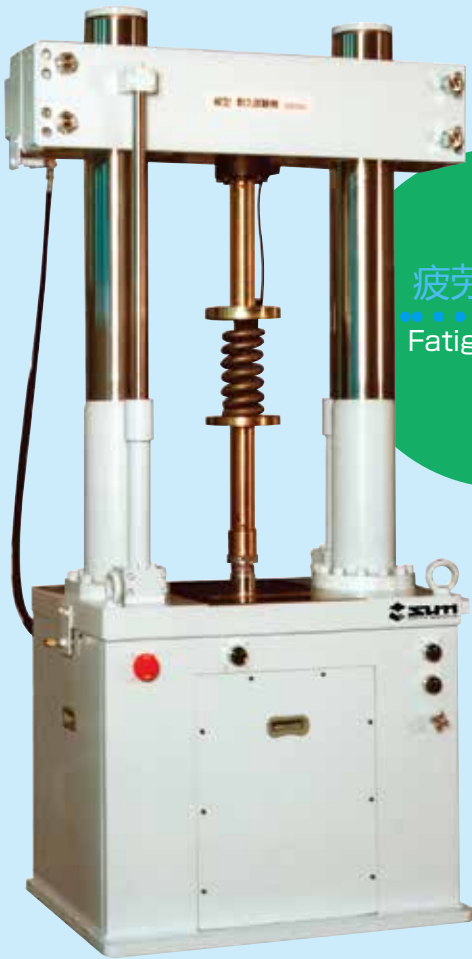
进行垫圈疲劳试验的试验机。

... performs fatigue test of the gasket.

750kN 垫圈试验机

Gasket
fatigue tester
(750kN)

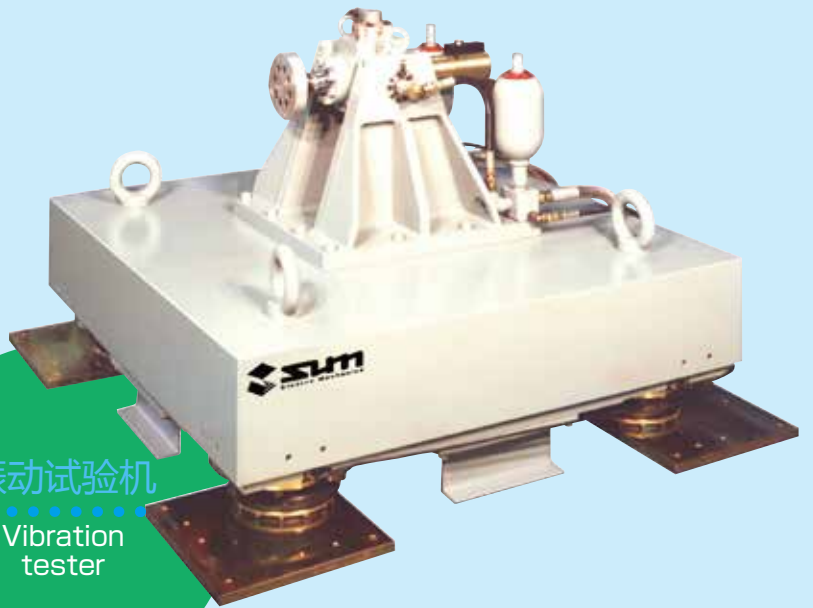




疲劳试验机
Fatigue tester

对各种零部件，材料等进行疲劳试验的装置。

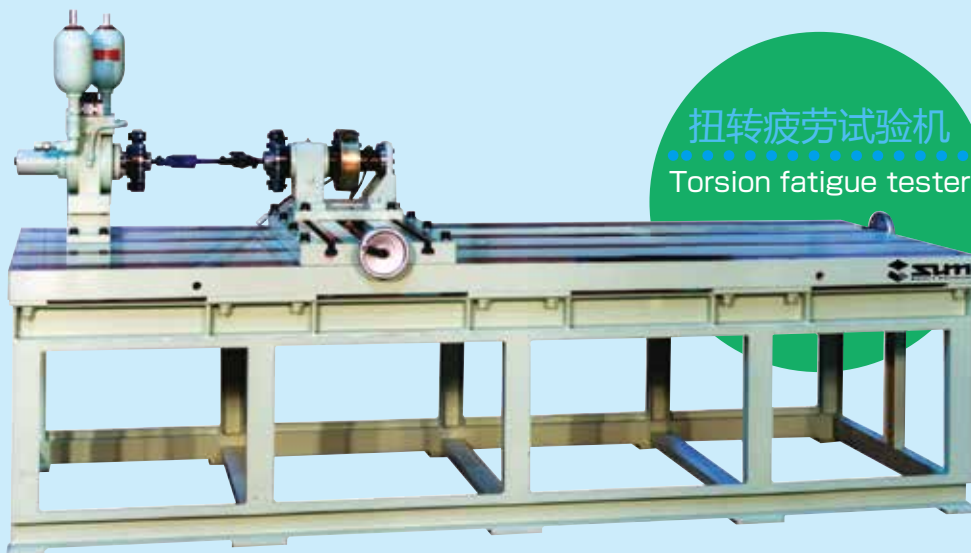
... performs fatigue tests for materials and automobile parts.



振动试验机
Vibration tester

可水平、上下变更加振方向的振动试验机。

... can perform vibration test to horizontal and vertical directions.



扭转疲劳试验机
Torsion fatigue tester

可 X-Y 方向に移动反力台位置的扭转疲劳试验装置。

... performs fatigue test. reaction base of the tester can be moved along x-y direction.

SUM, your Security partner with World

技术合作伙伴



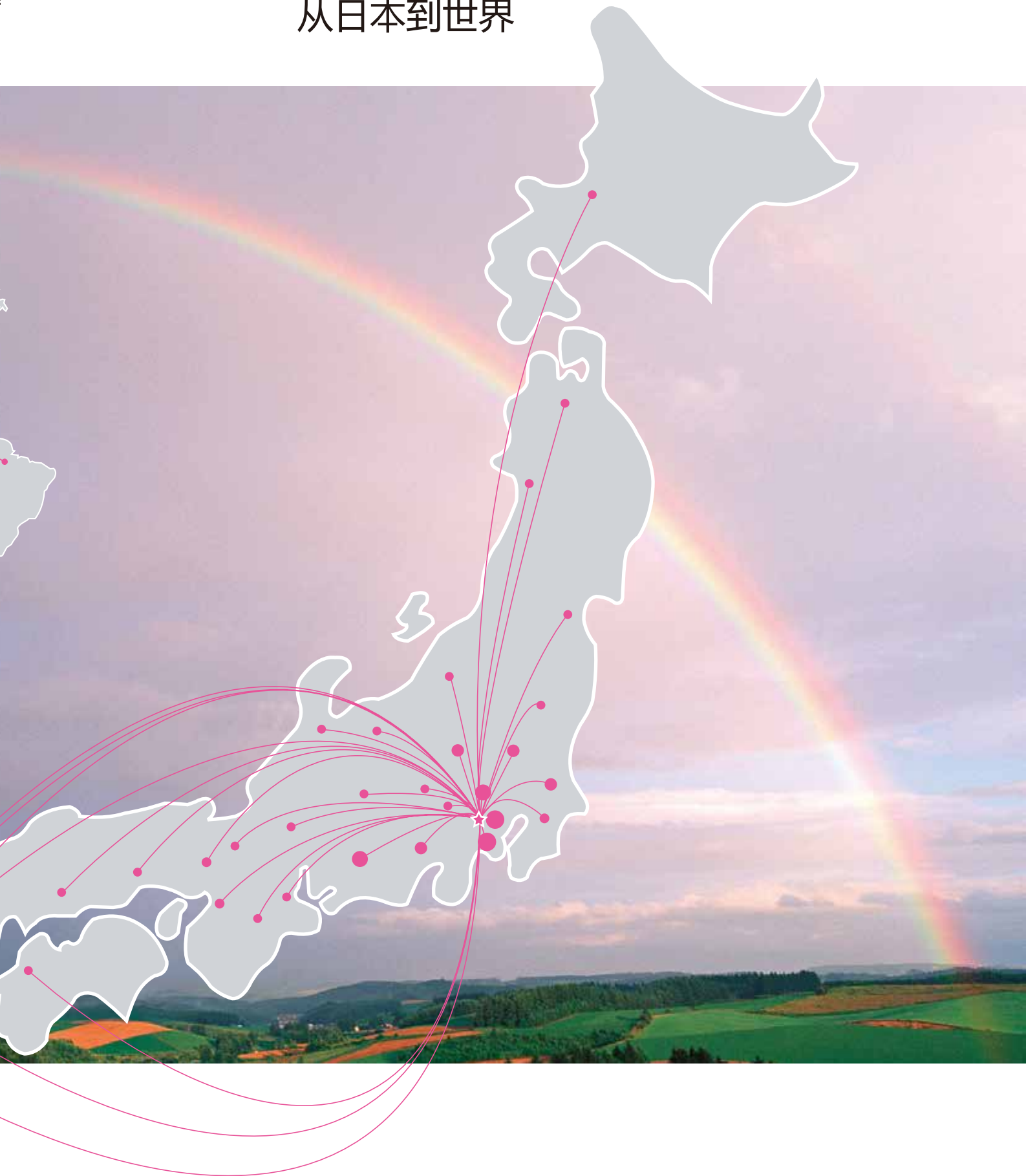
作为“优秀的伙伴”，为世界各地汽车及零部件迅速提供耐久试验设备，并进行维护保养。

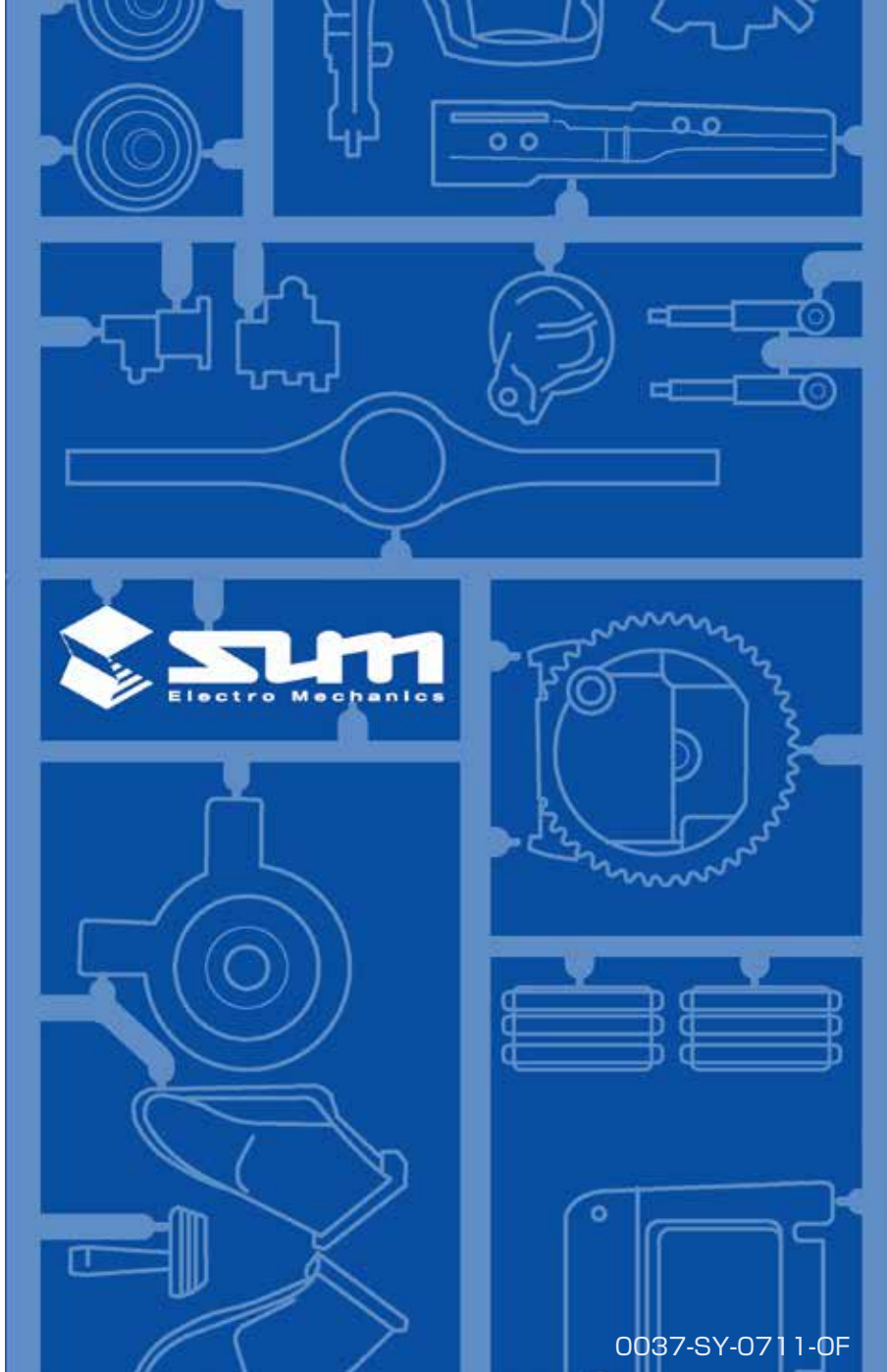
We continually strive to be a "Good Partner for all the International Automotive Industry" where the exacting needs for Endurance Test Machines prevail.



Global Cover in the automotive fields.

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