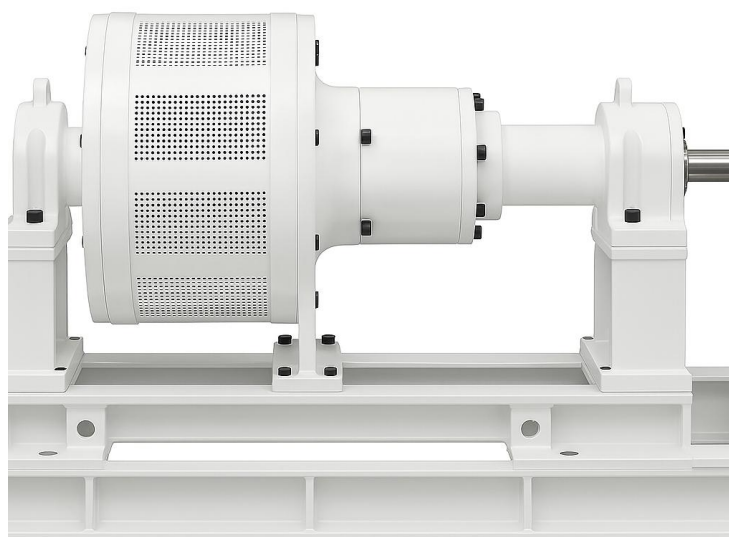


~Advanced Test System and Test Bench Engineering Professional~

Tokyo Plant Co., Ltd.

Product catalog



Disk Brake Dynamometer

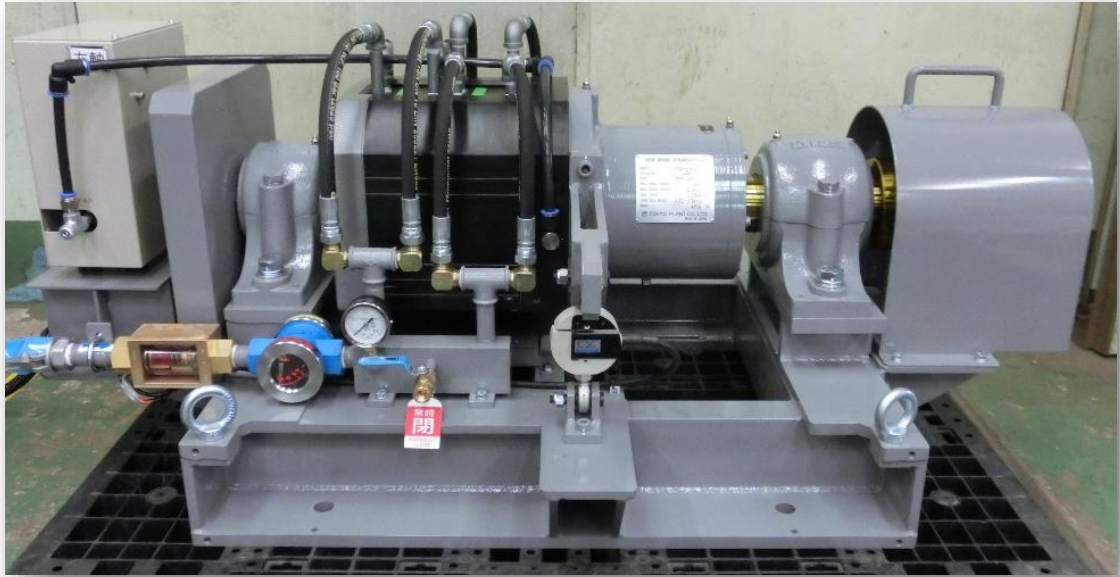
 TOKYO PLANT Co., Ltd.
東京プラント株式会社

Last update 2026/08/13

Copyright © Tokyo Plant Co., Ltd.

■ Overview

Our disc-brake dynamometers offer high precision and exceptional durability, and are widely adopted by customers both in Japan and overseas. They enable high-load testing from low rotational speeds, making them ideal for vehicle and drivetrain simulation as well as performance and load-durability testing across a wide range of applications.



■ Product Lineup

We offer a top-class product lineup in Japan, ranging from 12.5 kW to 340 kW.

■ Delivery Record (in no particular order)

Yanmar, Kubota, Kanzaki Kokyukoki, Shinko Engineering, Iseki Agricultural Machinery, CAE, and others.

■ Target Applications:

- Agricultural-machinery engines
- Construction-vehicle engines
- Tractors
- Trucks
- Generators
- Pumps
- Gearboxes, etc.



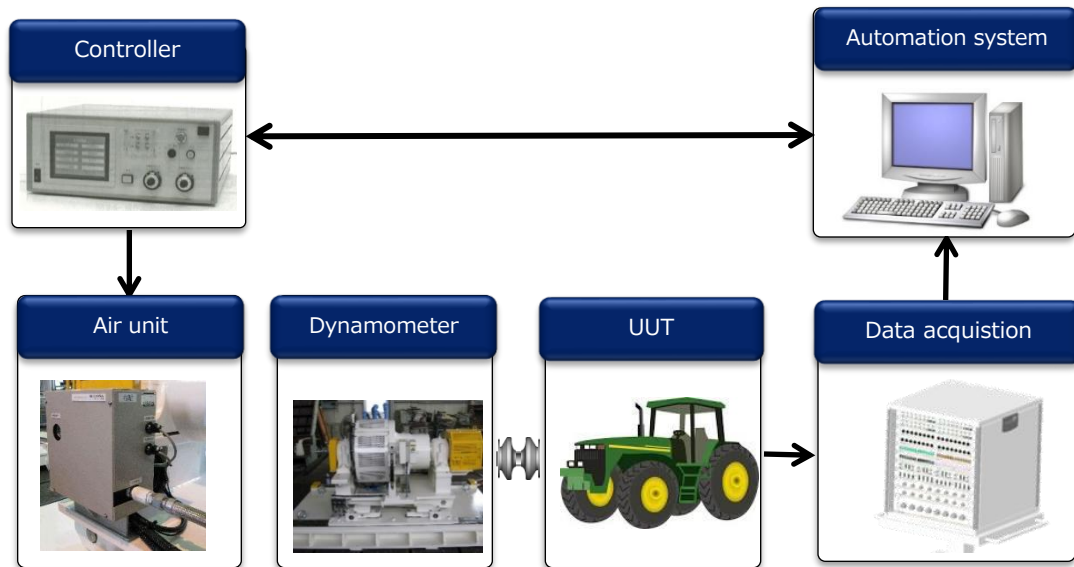
■ Tests Supported

- Durability Performance Testing
- Partial-Load Performance Testing
- Full-Load Performance Testing
- Axle Performance Evaluation
- PTO Performance Evaluation, etc.

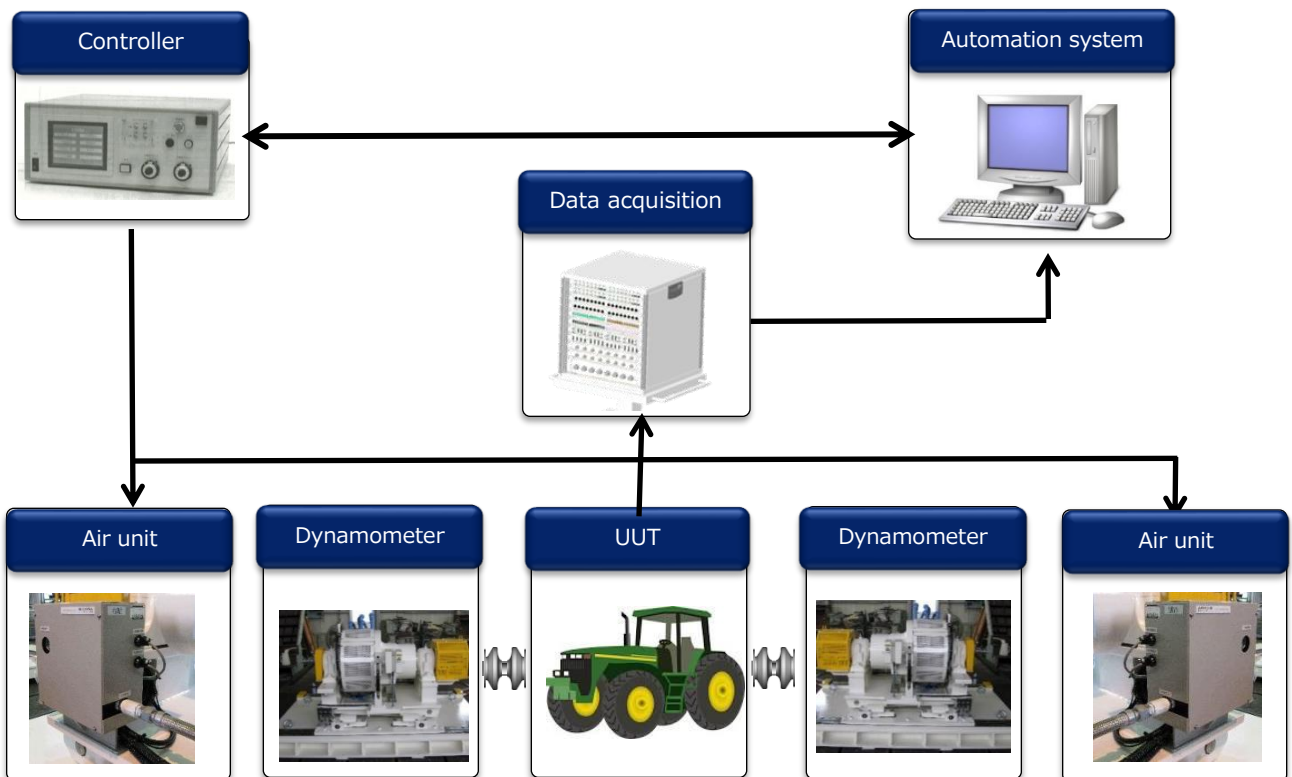
■ Key features

High performance	• Our disc-brake dynamometers enable high-load testing from low rotational speeds—something that is difficult to achieve with conventional dynamometers—making them ideal for performance and load-durability testing of agricultural and construction machinery. • The lining material is a non-asbestos type, eliminating concerns about dust-related pollution. It also exhibits minimal changes in friction coefficient due to temperature, allowing stable, long-duration continuous load testing. • Wide control range enabled by stable load-absorption characteristics. • Easy maintenance and long service life. • By using a special friction material, the lining life has been significantly improved compared with conventional friction-type brakes. • Excellent high-torque absorption capability from low rotational speeds. • Stall-torque measurement capability. The air-pressure-controlled friction brake allows accurate stall-torque measurement. • Low inertia enables highly reproducible testing with values equivalent or close to those of actual engines and vehicles. • Equipped with standard control modes for speed, torque, and current. • Product lineup includes small, medium, and large models, as well as high-speed and high-torque types. • Alarm signals are output in the event of overspeed or lubrication-oil supply failure, with relay contacts available for external use.
Easy operation	• Rotational speed and torque are displayed digitally as standard. • Analog voltage outputs for rotational speed and torque are provided. • Connector-based wiring prevents misconnection of cables.
A wide range of optional features (paid option)	• Automatic control functions enable constant-speed control, constant-torque control, and programmed operation control. • The center height can be modified according to customer requirements. • The anchor-bolt positions of the dynamometer base can be manufactured to match customer specifications

■ Typical system configuration (Single-Axis type)



■ Typical system configuration (Dual-Axis type)



We are able to propose the optimal dynamometer, measurement system, and auxiliary equipment tailored to each customer's needs. If required, we can also support the selection of automation systems, data-acquisition sensors, test bench layout, shafts, and dampers. Please feel free to contact our Sales Department with your requirements. We will provide the most suitable proposal that aligns with your budget and technical expectations.

■ Product lineup

○PCD type

This product lineup is ideal for testing small to medium-sized test objects.

Model	Max power	Max torque	Max speed	Constant Torque range	Moment of Inertia	Required Water volume
	<i>kW</i>	<i>N.m</i>	<i>Min-1</i>	<i>Min-1</i>	<i>kg.m²</i>	<i>L/min</i>
PCD-123C	12.5	380	3,150	0~306	※	7
PCD-223C	25	760	3,150	0~302		13
PCD-131C	25	1,050	2,250	1~218		13
PCD-231C	50	2,100	2,250	0~220		26
PCD-231C-M5	50	525	2,250	0~875		26
PCD-231C-M10	50	1,050	2,250	0~437		26
PCD-145C	50	3,300	1,590	0~140		26
PCD-245C	100	6,600	1,590	0~141		52
PCD-245C-M5	100	1,650	1,590	0~563		52
PCD-245C-M10	100	3,300	1,590	0~281		52

○PKD type

This product lineup is ideal for testing medium to large-sized test objects.

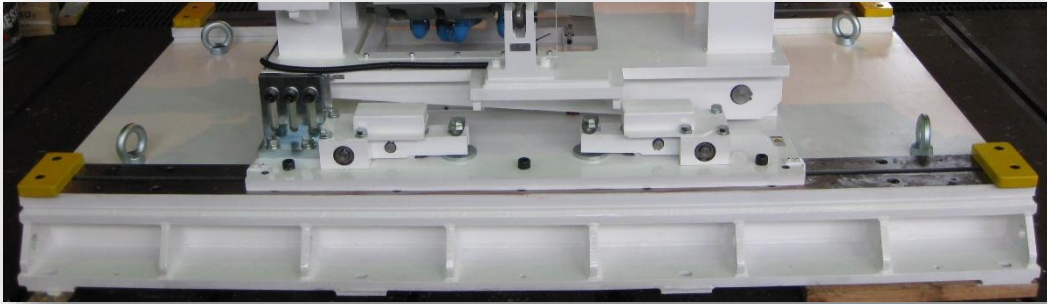
Model	Max power	Max torque	Max speed	Constant Torque range	Moment of Inertia	Required Water volume
	<i>kW</i>	<i>N.m</i>	<i>Min-1</i>	<i>Min-1</i>	<i>kg.m²</i>	<i>L/min</i>
PKD-218B	120	8,480	1,300	0~133	※	62
PKD-124HB	143	11,270	960	0~118		74
PKD-130B	172	18,060	760	0~90		89
PKD-224HB	285	22,540	960	0~118		148
PKD-230B	345	36,100	760	0~90		179

※The moment of inertia will be discussed separately.

※Specification Changes: Specifications are subject to change without prior notice due to improvements or updates.

■ Paid Optional Products

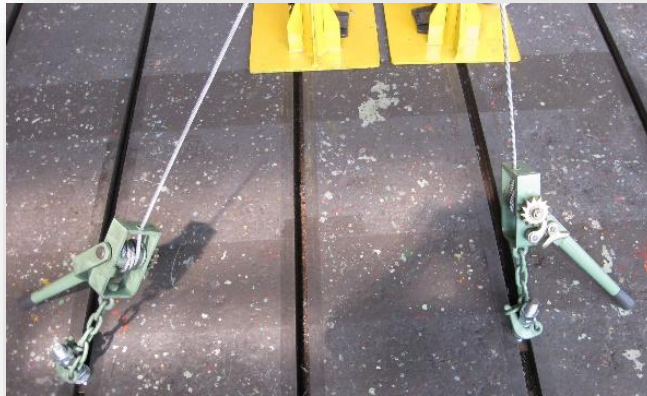
○ Slide rail



Product Overview

By adjusting and fixing the dynamometer position to match the test object's shaft location, connection work with the test object is greatly simplified. Detailed specifications will be finalized through discussions with the customer.

○ Fixing band



Product Overview

The fixing band secures the test vehicle (such as tractors and combines) in place, preventing tipping or displacement caused by vibration during testing.

※For vehicle testing, please ensure that the fixing band is always used to secure the vehicle. This is essential for safeguarding on-site engineers and maintaining a safe testing environment.

○ Sensor terminal box (MIO)

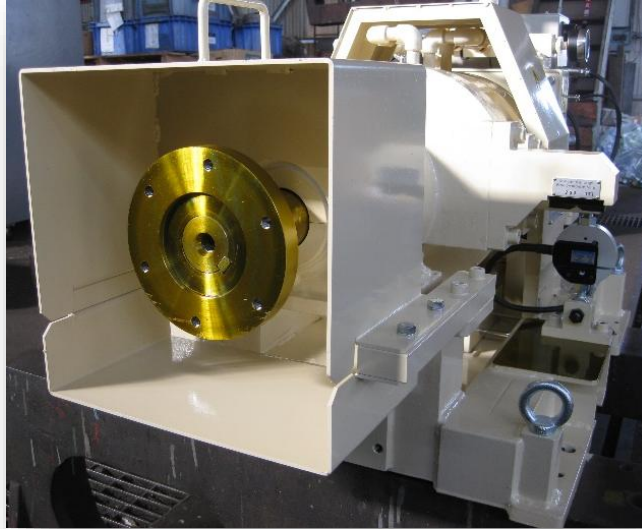


Product Overview

In engine and drivetrain bench testing, highly robust and scalable I/O modules are essential. The sensor relay box allows flexible configuration of modules and signal types—such as temperature, pressure, analog, digital, and contact signals—based on the customer's specific requirements.

■ Paid Optional Products

○Dynamometer-Side Coupling Flange



Product Overview

It is integrated into the main shaft of the dynamometer.

Detailed specifications will be finalized through discussions with the customer.

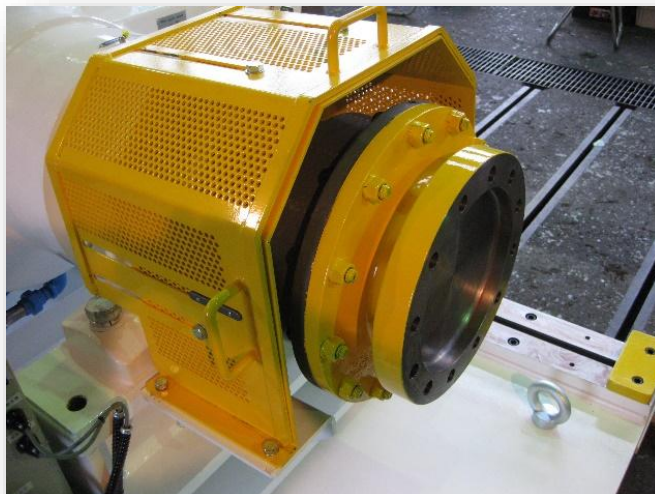
○Shaft, Dumper



Product Overview

The coupling flange connects the test object to the dynamometer and reduces torsional vibration. We also provide support in selecting the optimal shaft coupling for your application.

○Shaft guard



Product Overview

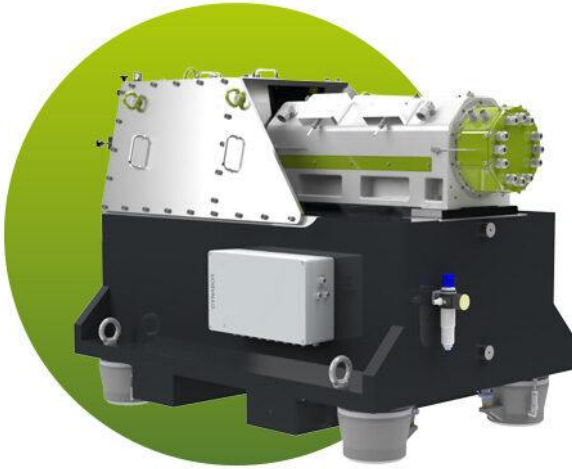
This is a safety cover designed to prevent scattering from the dynamometer-side coupling flange.

Detailed specifications will be finalized through discussions with the customer.

■ Related products

○ AC dynamometer, motor test bench

Our company also manufactures and sells AC electric dynamometers and motor test benches. We offer a wide product lineup ranging from a few kilowatts up to 2,500 kW, supporting high torque and ultra-high-speed operation exceeding 40,000 rpm. These systems require minimal installation space and allow cost-effective load-performance testing for a wide variety of engines. They are widely adopted by customers both in Japan and overseas.



For further details, please refer to the product catalog for our AC dynamometers.

Inquiry Process

Please feel free to contact our sales representatives by phone, email, or through our website.

○Frequently Asked Inquiries

Planning

Please share your plans for test cell and test bench commissioning, equipment upgrades, or modifications.

Quotation

Please provide information on the intended use of the dynamometer, test contents, engine specifications, measurement items, test patterns, and schedule.

Repair inspection

Please provide the model and serial number of the product you are using, as well as your preferred date and time for the requested service.

Technical questions

If you have any questions regarding the product's structure or operating principles, please let us know. We will connect you with our technical specialists.

Products Handling

If you have any questions regarding product operation or usage, please let us know. We will connect you with the product specialist.

Other inquiries

If you have any requests, comments, or questions, please let us know. We will connect you with the appropriate product specialist.

Any information you provide during inquiries or discussions will be handled with strict confidentiality. We take full responsibility for ensuring that all such information is securely managed within our company.



Contact Information

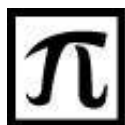
Tokyo Plant Co., Ltd. – Sales Department

515-5 Miyazawa-cho, Akishima, Tokyo 196-0024, Japan

TEL: +81-42-546-6500 FAX : +81-42-546-6600

URL : www.tokyo-plant.co.jp

E-mail: sales@tokyo-plant.co.jp



Since 1948