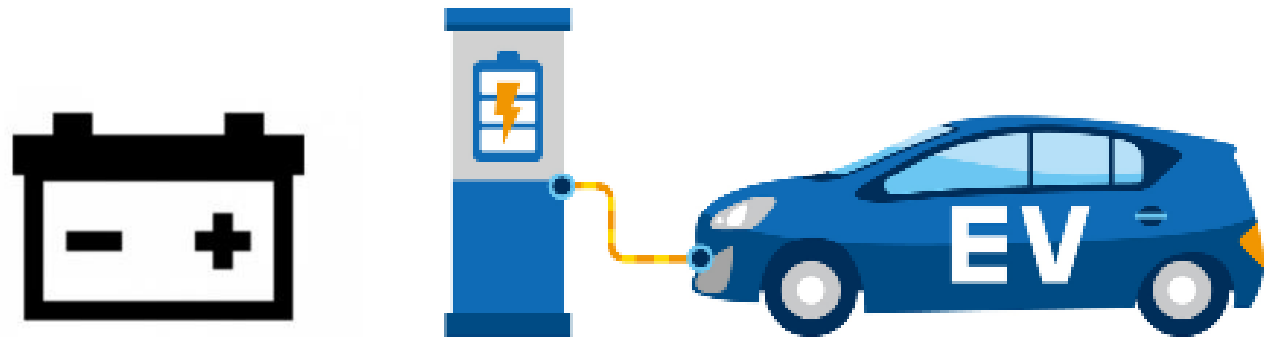




~Advanced Test System and Test Bench Engineering Professional~

Tokyo Plant Co., Ltd.



Solution Electric powertrain

Update 2026.08.14

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Our group's electrification solutions (Tokyo Plant and ENORISE) have been adopted by many customers both in Japan and overseas.

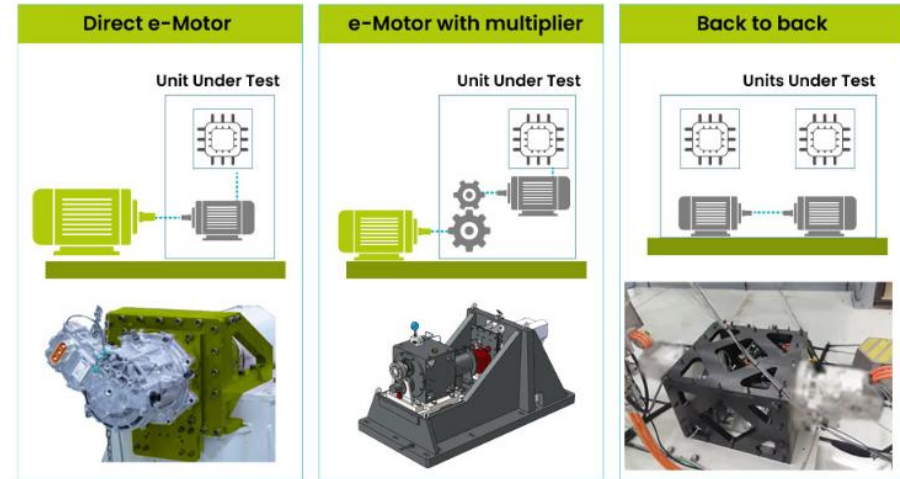
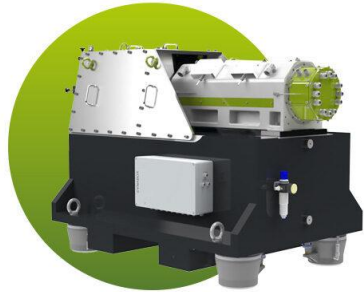


» Main Test Equipment

- ✓ Motor Performance Evaluation Test Bench
- ✓ e-Axle Evaluation Test Bench
- ✓ Vehicle Performance Evaluation Test Bench
- ✓ Battery Performance Evaluation Test Bench
- ✓ VTOL Performance Evaluation Test Bench
- ✓ Simulation (MBD)



» E-moter test bench



Model	Rated power kW	Rated Torque N.M	Base speed min^{-1}	Max speed min^{-1}	Moment of Inertia kg.m^2	Voltage (V) /Current (A)
DX250	250	400	6,000	25,000	0.066	460/490
DX300	300	600	4,780	21,000	0.129	495/554
DX400	400	500	7,700	24,000	0.130	460/1,207
DX500	500	600	8,000	20,000	0.139	460/1,554

- ※ Specifications are subject to change without prior notice due to ongoing improvements.
- ※ We support various types of motor testing.

» Custom Specifications

We can also manufacture custom-specification products tailored to your specific requirements.

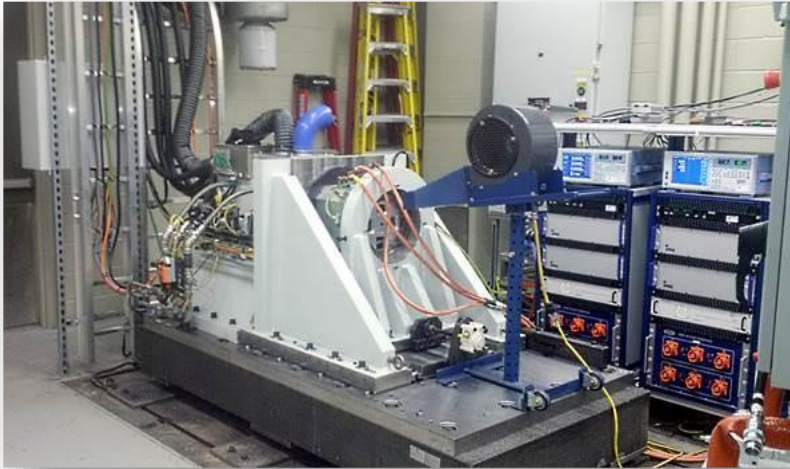
Main specifications)

Rated power : $\sim 2,500\text{kW}$

Rated torque : $\sim 2,000\text{Nm}$

Max speed : $\sim 40,000\text{min}^{-1}$

» E-motor test bench



» Scope of the project

- ✓Automation system MORPHEE
- ✓PM dynamometer
(300kW/20,000rpm)
- ✓Drive unit
- ✓Drive shafts

Feature)

Performance evaluation of electric motors can be conducted using a PM dynamometer. By utilizing power regeneration, the system reduces the customer's overall energy cost.

» E-motor test bench



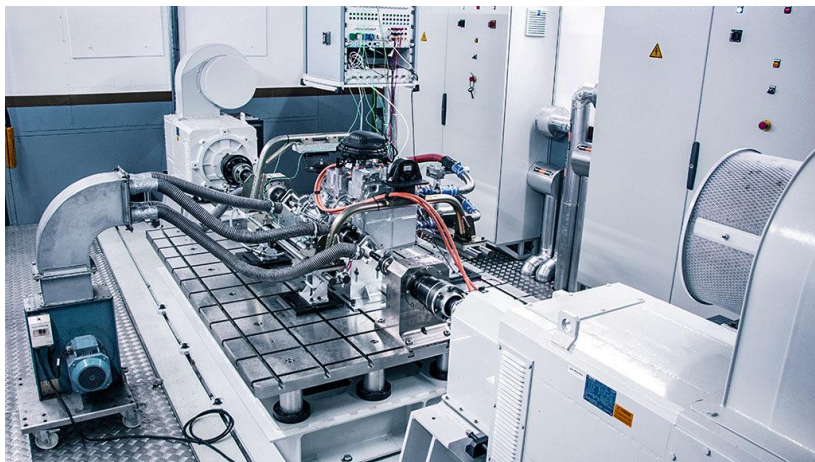
» Scope of the project

- ✓Automation system MORPHEE
- ✓PM dynamometer
(300kW/20,000rpm)
- ✓Drive unit
- ✓Constant-Temperature Chamber
- ✓Drive shafts

Feature)

Performance evaluation of electric motors can be conducted using a PM dynamometer. By utilizing power regeneration, the system reduces the customer's overall energy cost.

» eAXLE test bench



» Scope of the project

- ✓Automation system MORPHEE
- ✓2sets of AC dynamometer
(220kW/3,000Nm/3,000rpm)
- ✓Drive unit
- ✓2sets of Drive shafts

Feature)

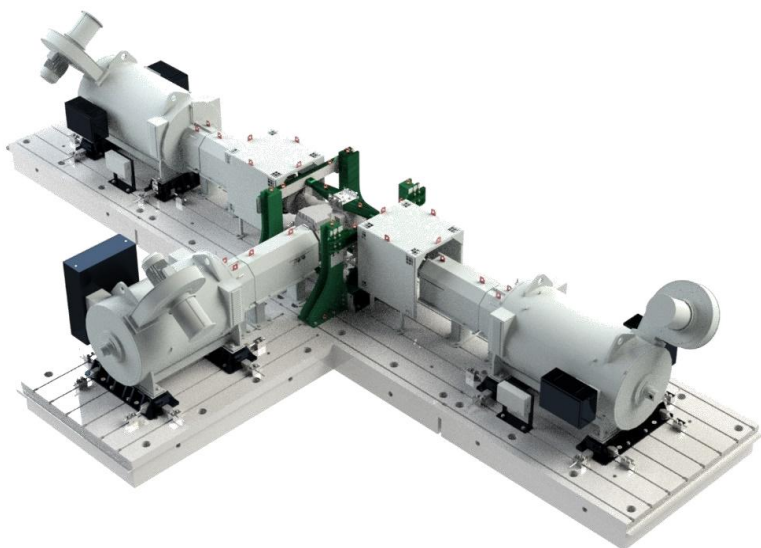
Performance evaluation testing of the e-AXLE can be conducted using two dynamometers. By utilizing power regeneration, the system reduces the customer's overall energy cost.

» eAXLE test bench for off-load application» Scope of the project

- ✓Automation system MORPHEE
- ✓1sets of AC dynamometer (Drive)
(6000kW/25,000Nm/3,000rpm)
- ✓2sets of AC dynamometer (Driven)
(450kW/40,000Nm/900rpm)
- ✓3sets of Drive unit

Feature)

Performance evaluation testing of the e-AXLE can be conducted using three dynamometers. By utilizing power regeneration, the system reduces the customer's overall energy cost.



» Fuel stack test bench



» Scope of the project

- ✓Automation system MORPHEE
- ✓1set of AC dynamometer (Drive)
(250kW/500Nm/20,000rpm)
- ✓4sets of AC dynamometer (Driven)
(290kW/4,200Nm/3,300rpm)
- ✓5sets of Drive unit
- ✓Constant-Temperature Chamber
- ✓Battery simulator

Feature)

Fuel cell performance can be evaluated under vehicle-equivalent simulated operating conditions.

» Wheel test bench



» Scope of the project

- ✓Automation system MORPHEE
- ✓4sets of PM dynamometers
- ✓Drive unit
- ✓4sets of shafts

Feature)

By directly connecting four dynamometers to the vehicle axles, the system can reproduce actual driving conditions, enabling exhaust-emission measurement, fuel-consumption testing, and performance evaluation of components such as the e-AXLE and transmission.

» Jet engine test bench



» Scope of the project

- ✓Automation system MORPHEE
- ✓PM dynamometer
(1,000kW/160000rpm)
- ✓Drive unit

Feature)

Performance evaluation of high-output, high-speed jet engines can be conducted. Altitude-equivalent simulations can also be performed.

» VTOL test bench



» Scope of the project

- ✓Automation system MORPHEE
- ✓2sets of PM dynamometer(Drive)
- ✓8sets of dynamometer(Driven)
- ✓Other systems

Feature)

The flight conditions of VTOL can be simulated.

» Electric outboard engine test bench



» Scope of the project

- ✓Control and measurement system (PLC)
- ✓AC dynamometer
- ✓Drive unit
- ✓Environmental temperature chamber
- ✓Spindle unit
- ✓Frame
- ✓Water tank

Feature)

Comprehensive performance testing of electric outboard engines can be conducted using our test bench systems.

» Battery test bench



» Scope of the project

- ✓Automation system MORPHEE
- ✓2sets of battery test chamber
- ✓Coolant system

Feature)

Battery performance evaluation equivalent to a 1,000-km driving range can be conducted.

We will participate in your project from the planning phase onward.

We provide seamless support throughout every stage — from creating requirement specifications and design documents, to product design, manufacturing, commissioning, and delivery. Rest assured, we also provide prompt and reliable after-sales service following delivery.

Planning



Please let us know your requirements, specifications, and requests. We can provide a variety of proposals based on your budget and testing needs.

We will also align with the customer's project goals to ensure successful achievement. A non-disclosure agreement will be concluded if necessary.

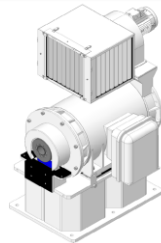
Contract



After the product manufacturing specifications, service requirements, definitions, and project amount are finalized, the contracting process will begin.

We will work closely with the customer to ensure that the project is executed in accordance with the agreed schedule.

Design, production



We will proceed with product manufacturing under strict delivery and safety control, ensuring compliance with the customer's defined requirements, functionality, and quality standards.

Also, conducting Pre-commissioning at our test bench.

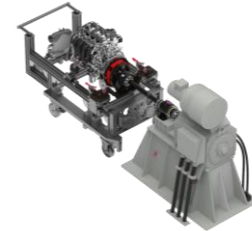
Delivery Civil work



After packing, we deliver the products with the utmost care to ensure that they remain secure and intact during transportation.

We also carry out civil engineering work such as installation, piping, and wiring as requested by the customer.

Commissioning Acceptance



System configuration is carried out, followed by reproducible testing and final adjustments at the customer's test bench.

After service

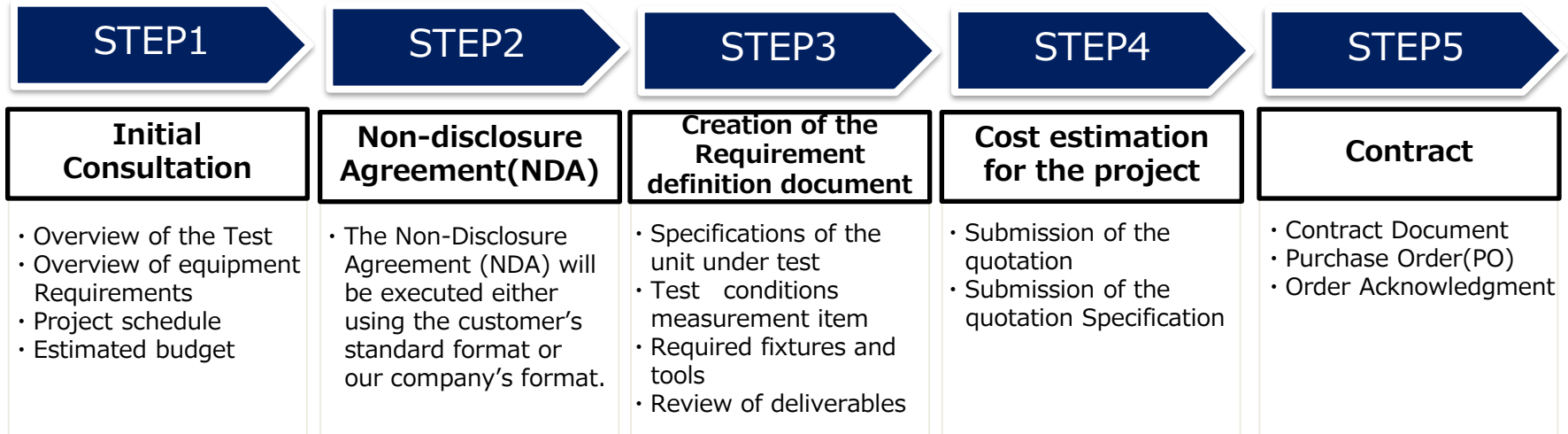


We provide long-term support even after product delivery.

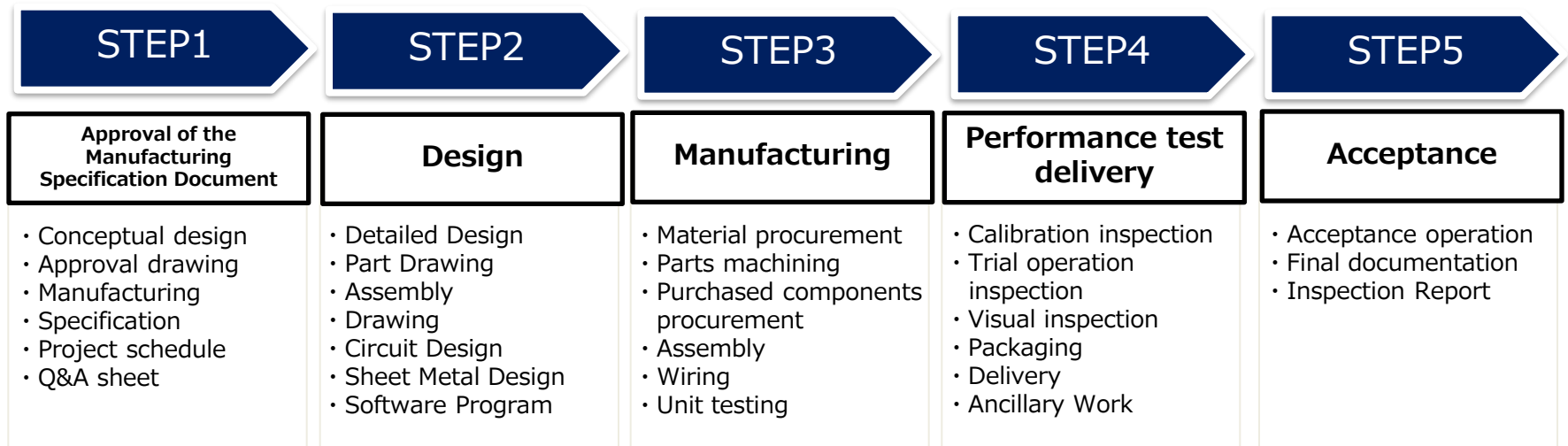
We offer prompt assistance anywhere as needed.

In addition, we propose product upgrades and maintenance planning to ensure continued optimal performance.

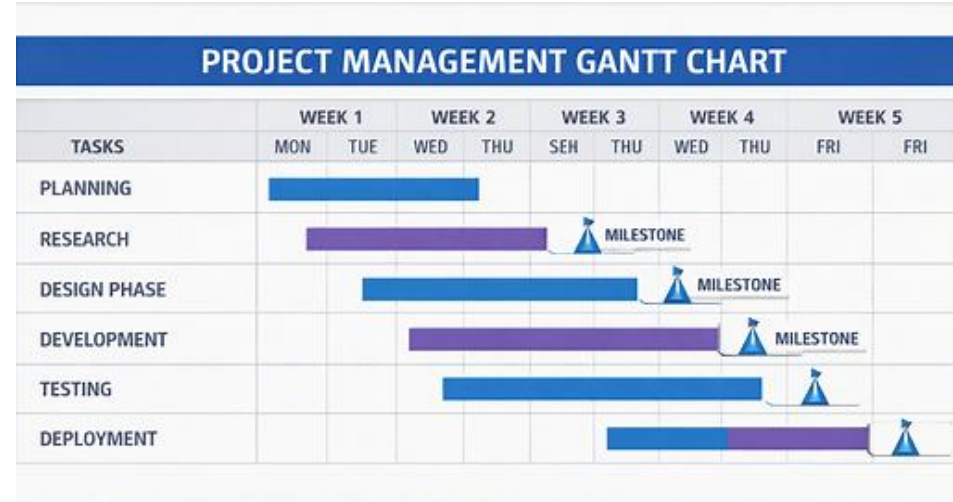
» Process from initial inquiry to contract finalization



» Process from project initiation to completion



» Project execution framework



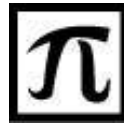
✓Project Leader and Assigned Members

We assign a Project Leader (responsible person) and project members according to the project's scale and type—whether it is a new installation, repair work, or on-site inspection.

✓Project Management

With clearly defined requirements and a firm commitment to achieving QCD (Quality, Cost, Delivery), we approach every project with the same passion as our customers and work sincerely toward its success.





Since 1948



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