

Over 100-Year History of Toyo Denki Seizo K.K.

Our company was founded in 1918 with the intention of “domestic production of electrical machinery for railway vehicles”. A spectacular feeling that we want to export products to domestic as well as to many Orient countries and contribute to the development of the country has come from the name of “TOYO DENKI SEIZO K.K.”. And this feeling has been handed down to successive employees, and now our products are contributing to the development of social infrastructure systems around the world.

to high economic growth

1918~1949



Group photo of our employees with technical advisors from the partner British Dick Kerr company.

1918 ● Technical cooperation with British Dick Kerr and establishment of the company with the capital of 3 million yen

1919 ● Operation started at Yokohama Factory



Yokohama factory at the start of operations (Hodogaya-ku, Yokohama)

1920 ● Control equipments and traction motors delivered directly to Keihan Electric Railway Co.

1921 ● Development of pantograph, first in Japan

1926 ● Start of manufacturing of three-phase commutator motor (AS motor)

1932 ● Development of electric equipment for trolleybus, first in Japan
● Completion of controller with regeneration brake using compound motor, first in Japan

1935 ● Development of diesel electric railcar, first in our country, and delivered to Sagami Railway

1949 ● Our stocks was listed on Tokyo Stock Exchange



Early domestic pantograph



AS motor

1950~1989

1950 ● Development of ST type three-phase AC Commutator motor (patented)

1952 ● Development of Cardan shaft driving device, first in Japan

1958 ● Completion of traction motor and controller for the Japan National Railways “Kodama” limited express

1959 ● Completion of automatic train stop

1960 ● Completion of traction motor and drive for Shinkansen testing car
● Order received for electric towing locomotive for the Panama Canal
● Development of constant-speed operation controller for vehicle, first in Japan
● Development of hydraulic winch for ship, first in Japan

1963 ● Delivery of pantograph for Shinkansen to Japanese National Railways

1965 ● Development of thyristor static Leonard equipment series, first in Japan

1969 ● Completion of automotive brake test equipment



Cardan shaft driving device



Japan National Railway 151 series limited express train “Kodama”



Electric towing locomotive for the Panama Canal



Japan National Railway Series 0 Shinkansen

1972 ● Development of brushless motor generator (BLMG), first in the world
● Development of 150kVA 440Hz static CVCF, first in Japan

1973 ● Completion of commutation ticket issuing system

1977 ● Completion of large high-speed automatic drafting machine

1978 ● Developed our proprietary AFE chopper device

1983 ● Completion of in-train ticket issuing system

1985 ● The current Yokohama Plant was completed

● Delivery of world-first superimposed field excitation control for 205 series electric train of Japanese National Railways

1988 ● Completion of world-first heat-pipe type 8-unit motor batch control VVVF inverter and delivery of it to Tokyu Electric Railway Co

1989 ● Development of small VVVF inverter using reverse conductive GTO thyristor, first in Japan

1990~2022

1990 ● Development of stroke switching type door closing machine, first in Japan
● Development of intelligent door system, first in Japan

1991 ● Development of light-weight VVVF inverter using 1,500V mass-production type reverse conductive GTO thyristor, first in our Japan

1997 ● Completion of in-train ticket issuing machine corresponding to automatic ticket checker

1998 ● Delivery of electric equipment for Beijing subway east-west line train

2000 ● Completion of permanent-magnet synchronous motor (ED motor)

2004 ● Development of electrical equipment for the world’s first micro gas turbine hybrid vehicle
● Joint development of the first full-flat, super-low floor light rail vehicle (LRV) produced in Japan
● Succeeded in development and running of in-wheel motor for car

2007 ● The new public transport smart card Pismo goes into service (delivery of automatic commuter ticket vending machine with support for smart card passes and smart card charge machines to station facilities)

2008 ● Start of sales of the VF66 inverter

2012 ● Order receipt of handsets for conductor for JR West

2014 ● Delivery of electrical machinery for Joetsu and Hokuriku Shinkansen E7

2018 ● May, Shiga Ryuo Plant completed
● June, Toyo Denki Seizo K.K. 100th anniversary

● Order received for consigned research and development of superconducting flywheel power storage system for railways

2019 ● Establishment of SIAM TOYO DENKI Co., Ltd. in Thailand

2020 ● Establishment of TOYO DENKI RAILWAY SERVICE, LLC. in the U.S.
● Delivery of electrical machinery for To-kaido and Sanyo Shinkansen N700S (mass-production model)

2022 ● Delivery of automobile testing system using in-wheel-well dynamo

● Transitioned to Standard Market of the Tokyo Stock Exchange



Beijing subway east-west line train



Los Angeles County Metropolitan Transportation Bureau P3010 LRV



In-wheel-well dynamo

From foundation to postwar

From postwar reconstruction

Global expansion and to the next 100 years