

# CKD NIKKI DENSO

Corporate Profile & Product Lineup



# C.B.C.

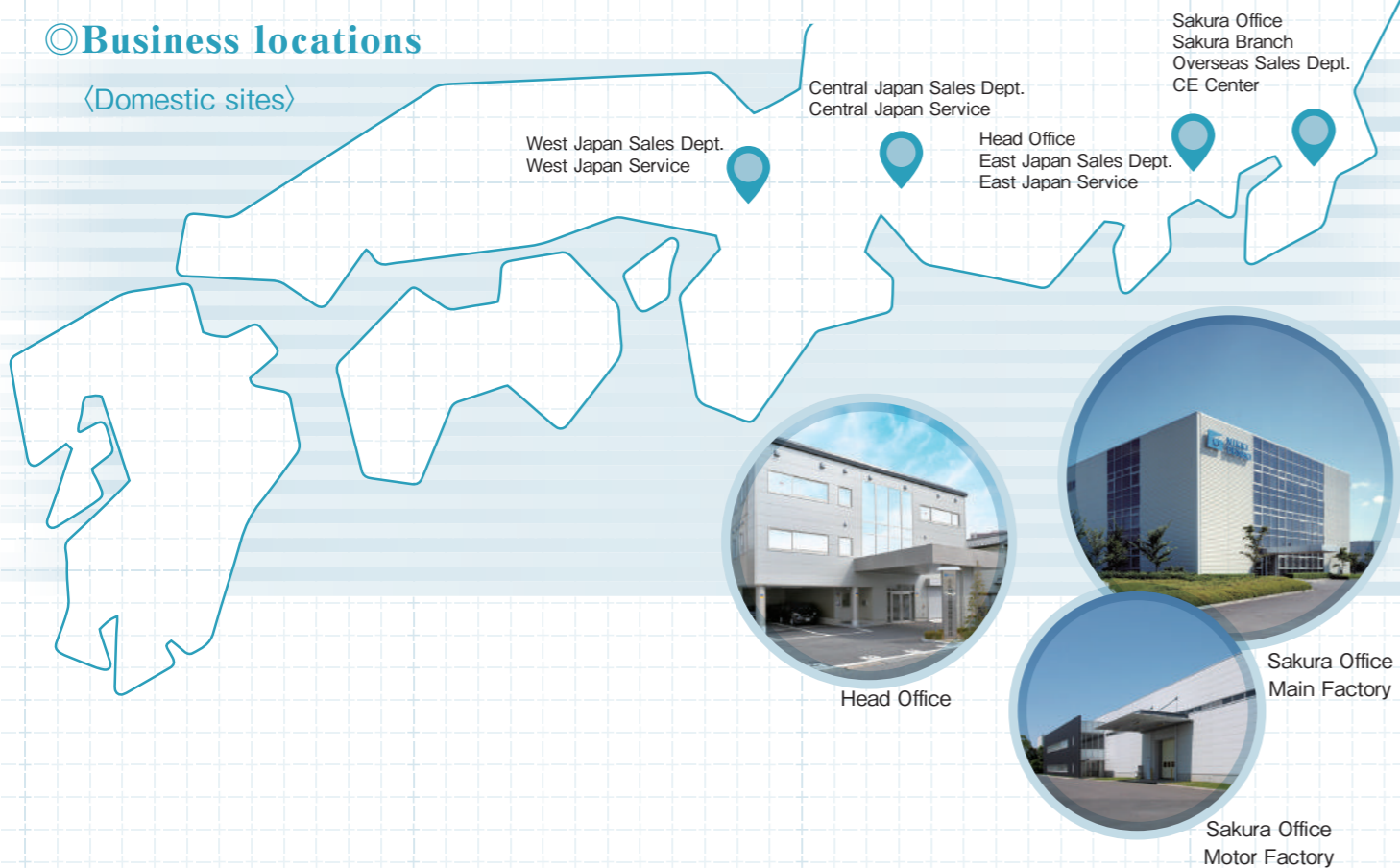
Control 制御 • Best 最善 • Creation 創造

## Corporate Philosophy

With the focus on the “development of dynamic power that fully satisfies any human command”, we contribute to the growth of our industrial world by continuously providing customer value.

## ◎Business locations

〈Domestic sites〉



## ◎Company profile

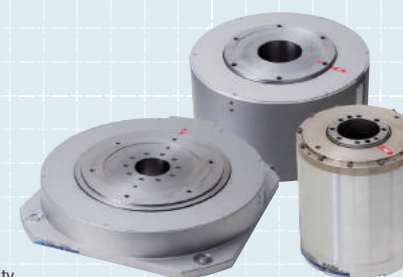
Company name	CKD NIKKI DENSO CO., LTD.
Establishment	March 29, 1967
Head Office	2-8-24, Arima, Miyamae-ku, Kawasaki-shi, Kanagawa-ken 216-0003 Japan TEL : 044-855-4311 / FAX : 044-856-4831
Sakura Office	1-4-2, Osaku, Sakura-shi, Chiba-ken 285-0802 Japan TEL : 043-498-2311 / FAX : 043-498-2224
Business details	Design, development, production, sale, and servicing of direct drive servo motors, linear servo motors, AC servo motors, linear stages, servo drivers and other factory automation drive devices for industrial machines
Capital	100 million yen
Representative	Chief Exective Officer : Shigeru Kawamura Chief Operating Officer : Tatsuya Nishio
Employees	242

## ◎History

- 1967.03 Establishes NIKKI DENSO CO., LTD. in Meguro-ku, Tokyo with 3.5 million yen in capital for the purposes of designing electric controllers and developing and researching applied products.
- 1969.03 Starts the production and sale of the adjustable-speed motor driver "NIKKI POWER PACK".
- 1971.10 Relocates the head office to Takatsu-ku (now Miyamae-ku), Kawasaki-shi, Kanagawa-ken.
- 1974.08 Develops a control DC servo driver.
- 1976.11 Launches "DYNAPACK", a DC adjustable-speed motor with a built-in controller.
- 1981.12 Establishes a second office near the head office for in-house assembly.
- 1984.05 Announces "ACTUS POWER", the industry's first asynchronous induction type AC servo system.
- 1986.12 Builds Sakura Office in Sakura-shi, Chiba-ken to prepare for full-scale mass production. Introduces the industry's first surface mounting line to meet the need for more compact products.
- 1992.04 Develops "SUPER MULTICOM", a CNC with independent 4-axis control.
- 1993.01 Develops 1-axis NC servo controller "NEXSRT". The company offers a series of products by building in NC functions tailored to various machine control needs.
- 1998.06 Launches the digital AC servo system "NPS-F" Series.
- 2003.03 Starts the sale of the direct drive motor/linear servo motor "τ" Series.
- 2003.09 Registers the direct drive motor name "τ DISC" as a trademark.
- 2004.09 Starts the sale of the arc-shaped linear servo motor "τ Servo Compass" for required operation angles.
- 2005.12 Develops the "τ Linear Stage" as a high-precision linear stage model.
- 2006.04 Builds a precision machine factory on the premises of Sakura Office.
- 2007.10 Expands the third factory of Sakura Office to a floor space of 3,300 square meters to increase the production capacity.
- 2010.04 Starts the sale of the τ iD Roll, a direct drive motor for general-purpose industrial machines.
- 2010.07 Announces the "τ Engine" as the company's policy of developing industrial motors and drive systems that meet the global environmental issues.
- 2010.11 Registers the "τ Engine" as a trademark.
- 2014.04 Starts the sales of the "VPH Series" high-performance servo driver for direct drive.
- 2017.04 Joins the CKD Group through a business partnership with CKD Corporation.
- 2017.04 Completes the new head office building.
- 2017.06 Changes the company name to "CKD NIKKI DENSO CO., LTD."
- 2018.03 Obtains ISO 9001:2015 certification.
- 2021.03 Obtains ISO 14001:2015 certification.



Sakura Office



τ DISC



τ Engine

## ◎Message



Chief Exective Officer  
Shigeru Kawamura

Since 1967, CKD NIKKI DENSO CO., LTD. has been developing its own unique technologies, starting from the period of DC servo motors, with the aim of developing dynamic power that fully satisfies any human command.

We specialize in the field of drive control for industrial machines essential for the manufacturing industry that supports the Japanese industrial and economic sector. By creating more sophisticated, faster, and more stable industrial drive systems, we increase the productivity of all industrial machines and contribute to Japan's industrial development. Technology doesn't exist for itself. It exists to increase the value of all machines that adopt it. We not only develop new technology but also create values for our customers and their machines together. We are not complacent about the current situation. Solving our customers' problems one by one, we will continue to focus on innovating new dynamic power control. By leveraging the machine and electric control integration know-how that we have gained from our problem-solving experience, we will evolve from "dynamic power control" to "system control" for controlling machinery itself.

# C.S.S. Consult Solution Satisfaction

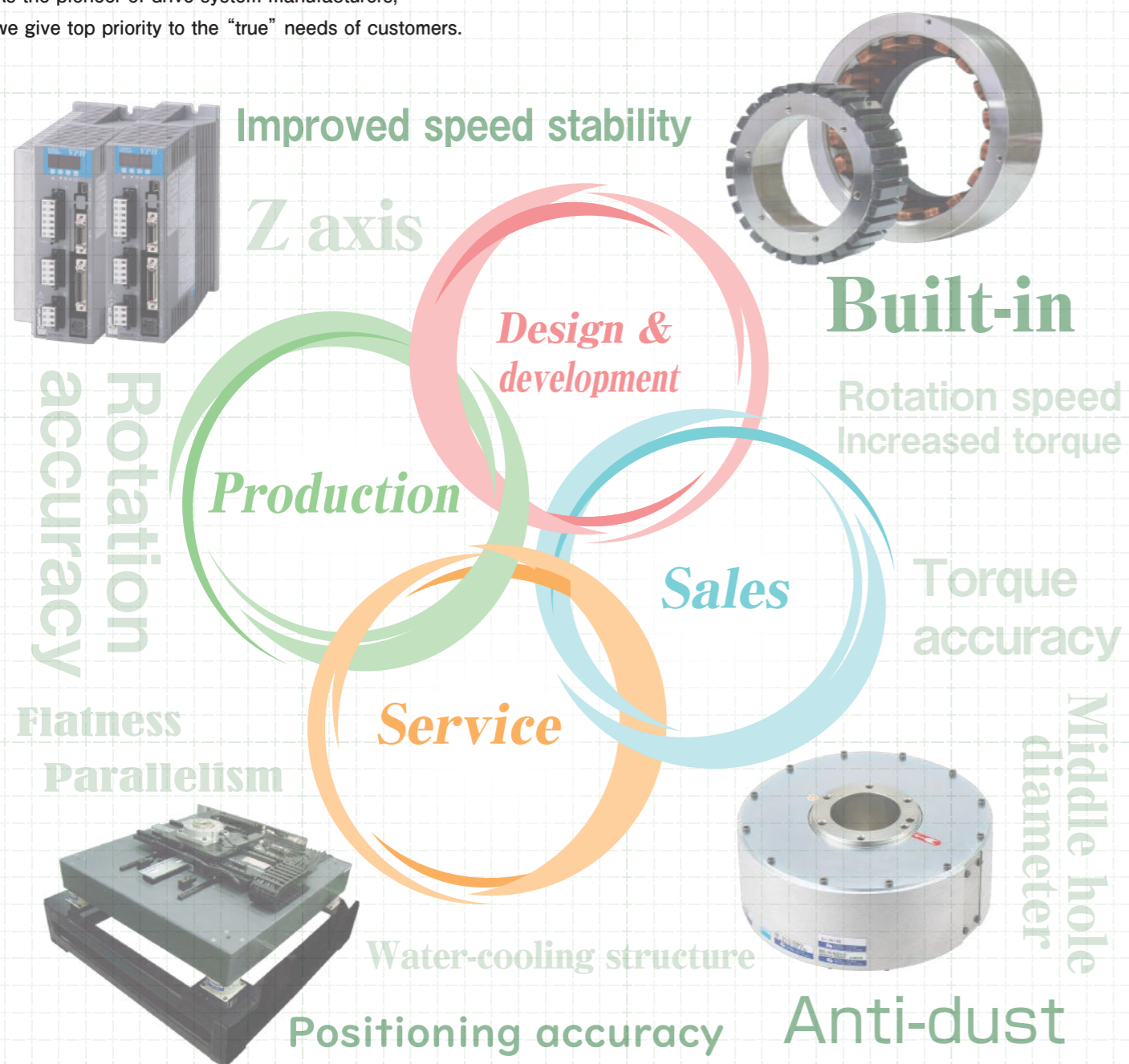
相談 解決 満足

CKD NIKKI DENSO CO., LTD. develops and produces the core components of drive systems - motors, servo drivers, and even encoders - as a drive system manufacturer.

Our perpetual pursuit of “better machine performance” will continue in all aspects of manufacturing such as precision, response performance, control, customization, embedding, and environment.

To address various problems of customers, we design and develop products that are tailored to specific purposes, uses, and applications.

As the pioneer of drive system manufacturers, we give top priority to the “true” needs of customers.



## Design and development department

### Next era-oriented development concept

The design and development department is always focused on the “next era” and committed to product research and development day to day. Engineers of this department not just communicate with the sales department but sometimes directly contact customers for input in order to keep creating products of the leading edge and the next era.



## Manufacturing department

### Provision of high-quality products

To ensure that high-quality products are always delivered to customers, this department conducts quality checks, with high inspection accuracy levels specified for all processes from reception of parts, parts processing accuracy, and product shipment.



### Flexible production system and technology

A production system that can quickly address high-mix low-volume manufacturing needs is in place to precisely meet diverse requests from customers. The department is committed to research, reform, and improvement in order to establish new production technology.

## Sales department

### Efforts to provide customer value

In order to meet all kinds of needs of the industrial world, the sales department sometimes invites the customer to join their discussions even from the product development phase, ensuring that an optimized control drive system is produced. Combining the elementary technology with the existing product line, they offer an optimal drive system solution that provides the greatest added value for the customer’s industrial machinery.



## Service department

### Total engineering service based on the spirit of customer engineering (CE)

Through four domestic service sites, this department offers total engineering service for after-sales consultation, new product proposals, etc. to ensure that customers continue to use our products, with the focus on reliable repair skill, satisfactory quality, and quick service.



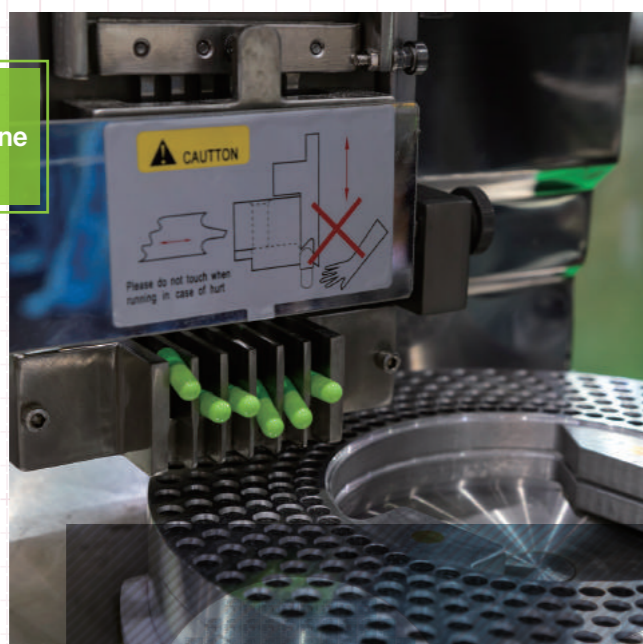
# Technology Development Future

技術 開発 未来

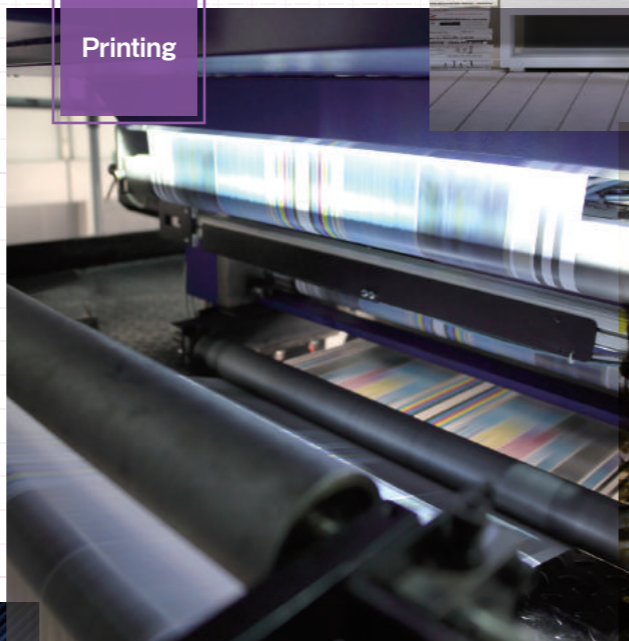
AI, IoT, and other advances in technology are significantly changing today's society. Automation, higher precision, higher speed, advanced functionality, and so on are increasingly required not only in manufacturing factories but in other parts of society as well.

CKD NIKKI DENSO CO., LTD. aims to develop drive system technology that can be used in various areas, with an eye on a future society that lies far ahead.

Medicine



Printing



FPD



Construction



Our products are used for vibration control (shock absorber) drive for tall buildings and ball park seats, as well as for processing and transport drive for large flat panels, solar panels, etc.

Electric-power, etc.



Food



Amusement



Logistics



Our products are used for precision drive in various processes of semiconductor production, high-speed transport drive for processing and inspection of tiny electronic parts, and durability testing drive for automobile transmissions, engines, etc.

Semiconductors



Automobiles



Our products are used for ultra low speed stability drive for astronomical equipment, fine grinding drive for optical lenses, and even precision feed drive for high-performance film forming.

# Direct Drive Motor

The direct drive motor connects directly to a load and transmits power and motion without the intervention of any intermediate mechanism such as a reducer.

The direct drive motor  $\tau$  DISC upgrades the machine performance through high-speed operation, stable operation, highly precise positioning, etc.

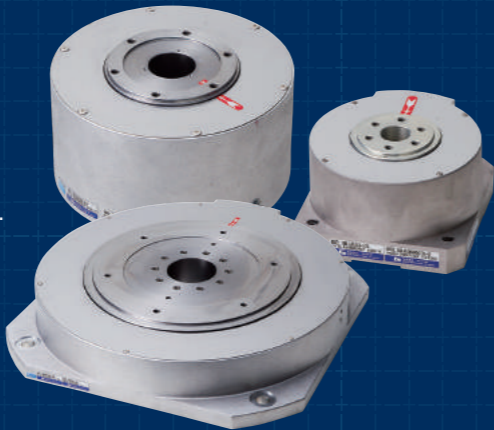


## Standard Rated torque 3.4 to 500N·m

$\tau$  DISC ND-s Series

Ideal for converting the AC servo motor + reducer mechanism into a direct drive system.

- ◎Popular standard type pursuing cost performance
- Suitable for various applications.
- ◎Compact design. Higher torque density and optimized thermal structure and magnetic circuitry have reduced the volume ratio by 25% from previous models.

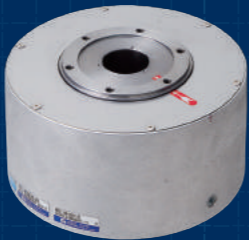


## High-speed rotation Rated torque 8 to 24N·m

$\tau$  DISC ND-s HS Series

Ideal for applications that require high-speed and high-precision operation.

- ◎High-speed rotation specification model of the ND-s Series
- ◎Pursuing compactness and high-speed operation.
- ◎Lineup of motors whose rated rotation speed ranges from 11 to 15 rps (660 to 900 rpm)

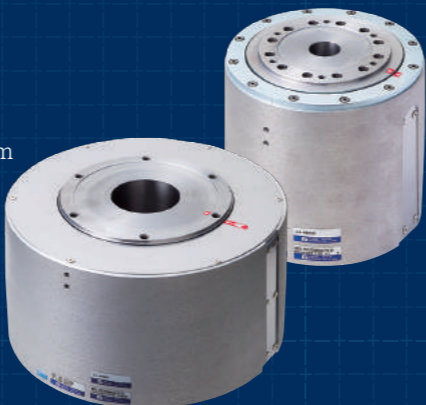


## High rigidity & high precision Rated torque 10 to 2000N·m

$\tau$  DISC DD-s Series

Ideal for applications that require stable operation for a load with large inertia.

- ◎High-rigidity type pursuing high rigidity and high precision
- ◎Significant improvement in moment rigidity, axial rigidity, and rotor torsional rigidity
- ◎Pursuing positioning accuracy and run out accuracy.



## High response Rated torque 27 to 68N·m

$\tau$  DISC HD-s Series

Ideal for applications that require a small operation angle and high-speed operation.

- ◎High-response type pursuing high-speed operation
- ◎World's top level high response performance with a high-torque, low-inertia structure

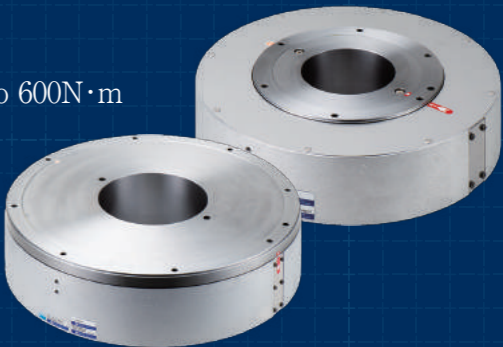


## Large middle hole diameter Rated torque 17 to 600N·m

$\tau$  DISC FD-s Series

Excellent environmental durability makes this model an ideal drive source for general-purpose industrial machines.

- ◎The large hollow structure increases machine design freedom.
- Maximum middle hole diameter: 150 mm
- ◎IP55 specification and break-equipped specification are also available.
- ◎Suitable for general-purpose industrial machines.
- ◎Suitable for transferring large inertia.

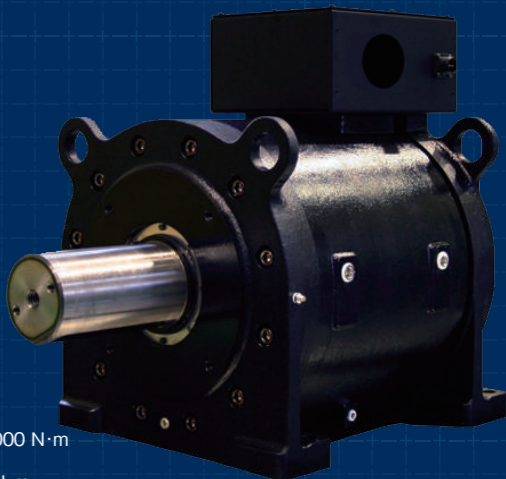


## Large torque cylinder type

$\tau$  iD Roll iD Series (water cooling type/fan cooling type)

Suitable for driving industrial machines that require speed stability and large torques.

- ◎Gear-less, non-hydraulic direct drive makes industrial machines more precise and more efficient and provides greater space savings and improvements in environmental friendliness and safety.
- ◎ Water cooling type ID Series / Rated torque: 550 to 7500 N·m   Maximum torque: 1000 to 12000 N·m
- ◎ Fan cooling type ID Series / Rated torque: 150 to 2800 N·m   Maximum torque: 450 to 7000 N·m



# Linear Servo Motor

The  $\tau$  Linear servo motor is a linear servo motor that is available in two models.

The coreless model offers high response performance, and the core model enables high-speed positioning of a massive load.

A diverse lineup is provided from which to select a desired one from different perspectives such as operation specifications, thrust, and stroke.

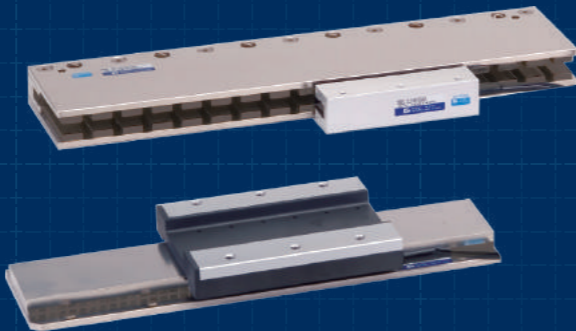
The  $\tau$  Servo Compass allows the arc operation to be performed as appropriate for the required angle. A desired one can be selected from a variety of models according to the purpose and use.

## $\tau$ Linear

### High precision & high-speed operation

Direct linear drive realizes high-quality, high-performance machines.

- ◎ NVA Series (coreless, high-performance type) Rated thrust: 23 to 900 N
- ◎ NLD Series (coreless, standard type) Rated thrust: 50 to 1000 N
- ◎ NLA-S Type (coreless, small-thrust type) Rated thrust: 7 to 13 N
- ◎ NLA-MA/NA Type (core) Rated thrust: 250 to 1500 N

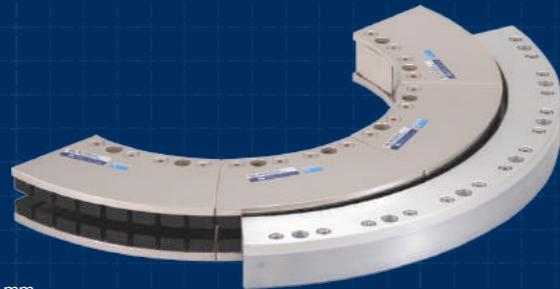


## $\tau$ Servo Compass

### Innovative performance

Innovative arc-shaped linear servo motor

- ◎ Supporting various operation angles from small angles to multiple turn operations, this product provides a space-saving, cost effective alignment stage.
- ◎ R850 / R1550 Type (operation angle-limited type) Power radius: 825 mm / 1525 mm
- ◎ R200 / R360 / R500 Type (multiple turn type) Power radius: 178 mm / 335 mm / 475 mm



### ◎NIKKI Techno Plaza Showroom

We have the “NIKKI Techno Plaza” on the premises of the Sakura Office, where visitors can see our latest products. Demonstrations of direct drive, linear stage, and other products are also given.

Please come and visit our showroom.



# Product Lineup

## Linear Stage

### $\tau$ Linear Stage

High performance & precision are guaranteed.

Combined with servo control technology, this product realizes a high-performance linear stage.

- ◎ Positioning accuracy and speed stability are guaranteed (option).
- ◎ The X, XY, and XY $\theta$  stages can be built.
- ◎ We have a rich lineup available and meet customization needs.

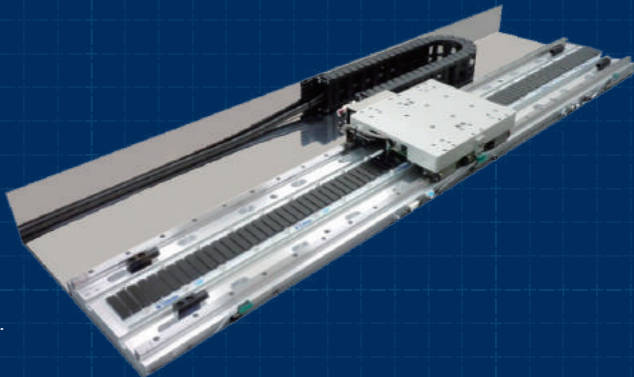


### Stage Block

#### Suitable for transport.

Cost effective linear stage

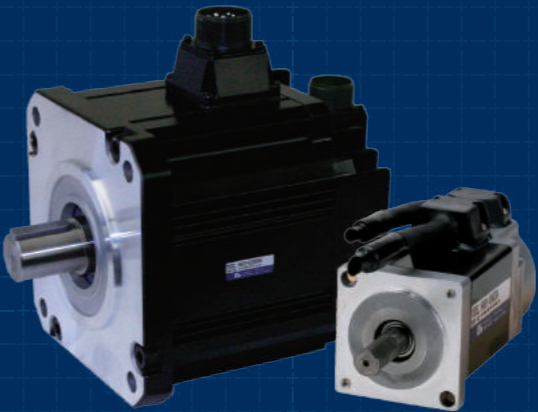
- ◎The X, XY, X $\theta$ , and XY $\theta$  stages can be built easily.
- ◎ Long strokes are supported and the maximum stroke length being 21.3 m.
- ◎ Maximum speed: 2.67 m/sec to 5 m/sec



## AC Servo Motor

NA80/NA800 Series

- ◎ Synchronous type
- ◎ Rated output 50W to 15kW



## Servo Driver

VPH Series

Maximizes the motor performance.

- ◎ Output capacity 50W to 75kW
- ◎ Support of SSCNETⅢ/H, MECHATROLINK-Ⅲ, EtherCAT, and CC-Link





Website <https://www.nikkidenso.co.jp>

Overseas sales dept.

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