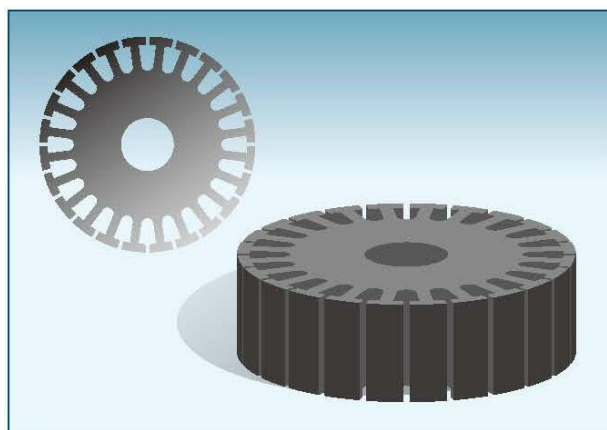


## NIPPON KINZOKU Group's Ultra-thin Electrical Steel Strips Realize Low Loss and Downsizing of Renewable Energy Power System and the High Frequency Inverter



GT Series



ST Series

NIKKINDENJI KOGYO CO., LTD., our subsidiary, is the only one manufacturer of the Ultra-thin Electrical Steel Strips (3% silicon steel) with the thickness less than 0.1mm in Japan. We have over 50 years of experience in production and sales of Ultra-thin Electrical Steel Strips. And we design cores and various reactors through many years of cultivated design technology, and offer those products including prototypes. Recently, the needs for low loss and downsizing rise in the renewable energy electric power market and the high frequency inverter market. So our Ultra-thin Electrical Steel Strips earn the domestic as well as the foreign customer's trust.

### Features

#### (1) Eco products

It has very low iron loss in the high frequency range, and contributes to higher efficiency and energy saving of high frequency transformers and high frequency reactors.

#### (2) High magnetic flux density

With high magnetic flux density in frequency 400 Hz-40 kHz compared with other materials, it can realize downsizing of the reactors.

#### (3) High magnetic permeability

It has high magnetic permeability and can be applied to shielding materials.

#### (4) Excellent insulation coating

With an excellent inorganic insulating coating, it enables "distortion annealing" to make the best use of the material characterization.

## Characteristics

(1) Grain Oriented Electrical Steel Sheet (GO)'s magnetic flux density (GT Series)

It has high magnetic flux density and contributes to downsizing of reactors.

•SIZE: thickness 0.04 mm to 0.12 mm, width 5 mm to 310 mm

<b>Reactor</b>	<b>Advantage</b>
High frequency inverter (e.g. UPS)	Low loss
Renewable energy power system (e.g. Power conditioners)	Downsizing
Direct current power transformer system	

<b>High frequency transformer</b>	<b>Advantage</b>
Welding machine, medical equipment and lighting	Low loss
	Downsizing

(2) Non Grain Oriented Electrical Steel Sheet (NO)'s magnetic flux density (ST Series)

It has low core loss and high magnetic flux density.

•SIZE: thickness 0.05 mm to 0.15 mm, width 5 mm to 310 mm

<b>Motor Core</b>	<b>Advantage</b>
Automotive (EV/HEV)	High rotation
HDD	(Reduction of heat generation)
Medical equipment	Downsizing

<b>Magnetic bearing</b>	<b>Advantage</b>
Turbo-molecular pump	Reduction of heat generation

## About NIPPON KINZOKU Group

Our products have been used in a range of areas from the precision field to the construction industry. <https://www.nipponkinzoku.co.jp/en/>

Note: This document has been translated from a part of the Japanese original for reference purposes only. In the event of any discrepancy between this translated document and the Japanese original, the original shall prevail.

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