Precision reduction gears are mainly used in the joints of industrial robots and are one of the core components that affect robot performance. Nabtesco’s reduction gears consist of high precision gears and are generally used in combination with a servomotor. The gears reduce the rotational speed of a servomotor to generate higher torque.

Nabtesco uses its proprietary technologies to create precision reduction gears that are compact and lightweight, have high shock load capacity, and are capable of highly accurate positioning. These distinctive features have won high acclaim in the market, and Nabtesco enjoys a 60% share of the global market for precision reduction gears for industrial robots, and a 60% share of the market in Japan for automatic tool changers used in machine tools.

Nabtesco’s rigid, high-performance products contribute to high-precision manufacturing.

Precision Reduction Gears

- **RV Series (Component Type)**
  - The RV Series reduction gears are compact and lightweight with outstanding rigidity and overload resistance. These features enable the RV series reduction gears to provide excellent accelerating capabilities, smooth motion and accurate positioning precision for enhanced robot controllability.

- **RD Series (Gear Head Type)**
  - This is a gear head type product based on the RV reduction gear with an emphasis on ease of use. The product is easily installed in servomotors and features airtight grease sealing.

- **GH Series (High-speed Revolution Type)**
  - This series has been widely adopted for applications such as transferring industrial robots and for use in gantry loader robots. High-speed and highly accurate positioning combined with high rigidity make this series ideal for transferring heavy loads.
Market Share of Nabtesco

Precision reduction gears for industrial robots 60% share of global market

Machine tool ATC drive 60% share of Japanese market