Servo Worm Gear Technology
EJ Product Group

Unmatched Precision and Versatility for the Machine Builder
NIDEC-SHIMPO has been at the forefront of developing gear technology to fulfill the requirements of our OEM customers. Our close partnerships with our installed customer base provided much insight into their evolving need for more high-precision right-angle gearing options. In order to fill that need, NIDEC-SHIMPO offers a full line of high-precision worm gearboxes, known as our EJ Series.

These servo grade gearheads are ideal for the most dynamic cyclical or continuous motion control applications. Each series incorporates a globoidal worm gear mesh design in order to achieve the torque handling capacity, shock load capability and level of precision that our customers have come to expect from us. Experience the ultimate in flexibility with multiple backlash options and several mounting configurations to get into the tightest spaces. We can customize these units even further to satisfy a variety of applications and operating environments.

Advantages of the EJ SERIES platform design

› Quiet operation, in comparison to traditional worm gearing products
› High shock load capacity, using oversized tapered roller bearings
› Absolute zero backlash available
› Wide range of output mounting options - Solid, hollow, dual shaft, shrink disc, ISO flange
› Compact, lightweight construction
› Exact gear reduction ratios for simplified system tuning
› Optimized mounting interface for virtually any motor
› Maintenance free, lubricated for life
**EJM SERIES**
Economical purpose servo gearhead with globoidal worm gearing. Light-weight aluminum housing with flexible coupling connection.

**Series Features**
- Globoidal worm gear mesh
- Economy leader of category
- Aluminum housing
- Standard backlash

**EJL SERIES**
Flexible all-rounder with optimized gearing. Various mounting and backlash options, dynamic performance at an affordable price.

**Series Features**
- Best price - performance ratio
- Multiple output options
- Aluminum/cast iron housing
- Three backlash levels

**EJH SERIES**
Globoidal worm gearing with high torque capacity, high-efficiency, quiet and smooth running. Standard, high-precision options with hollow or solid output shafts in a rugged package.

**Series Features**
- Globoidal worm gear mesh
- Strong internal structure
- Robust cast iron housing
- Two backlash levels

**EJP SERIES**
Globoidal worm gearing with high torque capacity, high-efficiency, quiet and smooth running. Standard and zero backlash options with hollow or solid output shafts in a premium package.

**Series Features**
- Globoidal worm gear mesh
- Zero backlash available
- Optimal sound characteristics
- Multiple output options

**EJS SERIES**
Stainless steel gearbox designed for sterile manufacturing environments. Smooth housing design allows for easy cleaning and bacteria free surfaces. Easy mounting to stainless steel servo or NEMA frame motors.

**Series Features**
- Globoidal worm gear mesh
- IP69K rated aseptic design
- 316 stainless with food grade oil
- Multiple output options

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### PERFORMANCE CLASS

**Frame Sizes**
- 02, 03, 05, 06, 09, 11

**Reduction Ratios**
- 5, 7.5, 10, 15, 20, 25, 30, 40, 50, 60

**Nominal Torque (Nm)**
- 29 – 614

**Maximum Accel. Torque (Nm)**
- 33 – 696

**Max. Input speed (rpm)**
- 4000

**Backlash (Arc-min)**
- 12 – 41

**Output Hollow Bore Size (mm)**
- Ø20 – 75

### HEAVY INDUSTRIAL CLASS

**Frame Sizes**
- 15, 20, 25, 30, 35

**Reduction Ratios**
- 5, 6, 7, 8, 9, 10, 15, 20, 25, 30, 40, 50, 60

**Nominal Torque (Nm)**
- 35 – 475

**Maximum Accel. Torque (Nm)**
- 46 – 663

**Max. Input speed (rpm)**
- 6000

**Backlash (Arc-min)**
- 6 – 32

**Output Hollow Bore Size (mm)**
- Ø25 – 60

### ECONOMY CLASS

**Frame Sizes**
- 25, 35, 45, 55, 63, 75, 90, 110, 125, 160, 200

**Reduction Ratios**
- 3.125, 5.2, 7.25, 10.25, 14.5, 15.25, 19.5, 20.5, 29.5, 30, 45, 60, 90

**Nominal Torque (Nm)**
- 8 – 3788

**Maximum Accel. Torque (Nm)**
- 13 – 6250

**Max. Input speed (rpm)**
- 6000

**Backlash (Arc-min)**
- 0.5 – 10

**Output Hollow Bore Size (mm)**
- Ø14 – 100

### HYGIENIC CLASS

**Frame Sizes**
- 38, 51, 64, 76, 89

**Reduction Ratios**
- 5, 6, 7, 8, 9, 10, 15, 20, 25, 30, 40, 50, 60

**Nominal Torque (Nm)**
- 35 – 480

**Maximum Accel. Torque (Nm)**
- 46 – 660

**Max. Input speed (rpm)**
- 6000

**Backlash (Arc-min)**
- 0 – 24

**Output Hollow Bore Size (mm)**
- Ø25 – 60

### HIGH PRECISION CLASS

**Frame Sizes**
- 39, 44, 50, 60, 76

**Reduction Ratios**
- 5, 7, 10, 15, 20, 25, 30, 40, 50, 60

**Nominal Torque (Nm)**
- 41 – 396

**Maximum Accel. Torque (Nm)**
- 47 – 721

**Max. Input speed (rpm)**
- 3000

**Backlash (Arc-min)**
- 4 – 24

**Output Hollow Bore Size (mm)**
- Ø19 – 35
Our right-angle servo grade gearboxes are ideal for applications within assembly automation, packaging, metal processing, converting, aerospace and semiconductor markets. If your application requires the compact footprint of a right-angle worm gear without sacrificing performance, contact NIDEC-SHIMPO about the EJ Series today.