**Entrust your parts feeding to NITTO SEIKO!**

NITTO SEIKO's patented models of 10 different parts feeders: Disk type, drum type, segmented type and spiral type, etc. Their cost and noise levels are lower and the required installation space is smaller compared with the other parts feeders.

NITTO SEIKO has taken the lead in Japan and overseas since they were introduced into the market.

The enormous expansion and expertise we can feed any part with confidence.

NITTO SEIKO is a leading company in the field of screws and screw fastening machines, meeting all of your feeding needs, which is indispensable for the manufacturing and assembly lines in automation.

**Product lineup**

![Model selection graph]

- **DF200**
- **FFS03H**
- **FFB803H**

**Screw capacity calculation formula**

Estimated screw capacity (%) = Coefficient × Diameter of screw (in mm) × 100

<table>
<thead>
<tr>
<th>Screw Type</th>
<th>Coefficient</th>
<th>Diameter of Screw (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DF200</td>
<td>30</td>
<td>≤L / (3.5 + dia.1 / 4)</td>
</tr>
<tr>
<td>FFS03H</td>
<td>50</td>
<td>≤L / (3.5 + dia.1 / 4)</td>
</tr>
<tr>
<td>FFB803H</td>
<td>50</td>
<td>≤L / (3.5 + dia.1 / 4)</td>
</tr>
</tbody>
</table>

*Dia.1: Screw diameter (mm), L: Screw length (mm), \( \leq L \) : When \( L \) is the correct range, \( L \) can be used.*

Example: Estimate for SH2000/SH3000 screws. The length is 10 mm. The length is 10 mm. The length is 10 mm. The length is 10 mm. — 2080 = (2080 ÷ SH2000) × (SH2000 / 3.5) × (10 / 4) × 100 = 30%

**Model description**

- **SH200 / SH300**

**Auxiliary hopper for less frequent screw filling (Optional)**

Separate installation space is not needed. The hopper is directly mounted on the screw feeder, and does not need much installment. It is operated by a conventional auxiliary hopper.

**Easy screw filling**

The barrel is removable. Low noise.

The nut-driven hopper prevents any bad turning noises.

**Easy mounting and dismounting**

The hopper is a range type and can be easily mounted and dismounted.

**Specifications and other matters are subject to modifications for performance improvements without notice.**

**Unique nouns like the product name indicated in this brochure are registered or not registered trademark of each company.**

**For more information, see our website or contact the nearest sales office.**

---

**SH200 Auxiliary hopper**

Hopper capacity is 6 or 321L.
Entrust your parts feeding to NITTO SEIKO!

NITTO SEIKO supplies models of 3 different parts feeder types: disk type, drum rotary collet type and multibelt type. Their cost and noise levels are lower and the required installation space is smaller compared with the other parts feeders.

More than 3000 models have been sold in Japan and overseas since they were introduced in the market.

Unlike the conventional selection and comparison, we can test any part with confidence.

NITTO SEIKO is building an in-house field of screws and screw fastening machinery, needing all our parts feeding needs, which is indispensable for manufacturing and assembly line amplification.

Product lineup

Model selection graph

Screw capacity calculation formula

<table>
<thead>
<tr>
<th>Screw capacity calculation formula</th>
<th>Estimated screw capacity (%)</th>
<th>Drilled capacity (all)</th>
<th>Drilled screw (all)</th>
<th>Screw (all)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>36 (1830 x L x d x (L + 1.1) / 8)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>128 (1830 x L x d x (L + 1.1) / 8)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>129 (1830 x L x d x (L + 1.1) / 8)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Easy screw filling

The barrel is removable.

Low noise

The motor reducer promises low running noise.

Easy mounting and dismounting

The hopper is a large type and can be easily mounted and dismounted.

Specifications and other matters are subject to modifications for performance improvements without notice.

Unique nouns like the product name indicated in this brochure are registered or not registered trademark of each company.

Further information can be obtained on our website or contact the nearest sales office.
For precision screws and micro screws

Disk Type Micro Screw Feeder

DF200

Solution for Precision and Micro Screws

Simple mechanism which is using rotary disk system. High efficiency is achieved because of very low incidence of jamming.

Easy operation

Crank can be changed to feed different diameter screws. Easy to operate. Any screw with the same shaft diameter, no matter how thick or thin, can be fed with the same ease. Installation in automatic lines

Efficient feeding guarantees line stoppage due to feed faults. Efficient screw feeding prevents line stoppage due to screw feeding fault. External I/O signals can also be used.

Precision screw/nut screw feeding

0.6 mm dia., fast, head, short length, micro screws, and other screws with captive washers can be fed.

[Specifications]

<table>
<thead>
<tr>
<th>Model</th>
<th>DF200</th>
<th>FF311DR</th>
<th>FF503H/FF801H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Screw</td>
<td>Drum</td>
<td>Screw</td>
</tr>
<tr>
<td>Power</td>
<td>DC</td>
<td>DC</td>
<td>DC</td>
</tr>
<tr>
<td>Speed</td>
<td>60rpm</td>
<td>60rpm</td>
<td>60rpm</td>
</tr>
<tr>
<td>Stroke</td>
<td>1mm</td>
<td>1mm</td>
<td>1mm</td>
</tr>
<tr>
<td>Stroke Rate</td>
<td>60rpm</td>
<td>60rpm</td>
<td>60rpm</td>
</tr>
</tbody>
</table>

[Application example]

Screw Driving Robot equipped with a DF200 unit

Compact Drum Type Screw Feeder

FF311DR

The solution for screws with captive springs and plain washers

A simple mechanism that lines up screws on the shoe rail, clears screw jamming and stark screws. This model is recommended if you use screws with captive springs and plain washers in PCB assembly.

Easy operation

Automated machine operation, minimizing screws easy.

Screws with captive springs and plain washers rarely jam.

Installation in automatic lines

Screws fed in quantities of 1 to 1,000 in the shortest time, up to 300 screws per minute.

Compact body

Body can be placed almost anywhere, allowing clearance of the production line.

Standard Centerboard Type Screw Feeder

FF503H/FF801H

Higher-quality screw feeding!

Always delivers the correctly sized screw to your spindle, without jamming.

Battery or VRLA power supply

Quickly Blow Feed Screws

Singles screw and feeds into a channel for fast, efficient work.

Horizontally linear feeding minimizes jamming.

Installation of screws to the header end.

[Specifications]

<table>
<thead>
<tr>
<th>Model</th>
<th>FF311DR</th>
<th>FF503H</th>
<th>FF801H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Drum</td>
<td>Screw</td>
<td>Screw</td>
</tr>
<tr>
<td>Power</td>
<td>DC</td>
<td>DC</td>
<td>DC</td>
</tr>
<tr>
<td>Speed</td>
<td>60rpm</td>
<td>60rpm</td>
<td>60rpm</td>
</tr>
<tr>
<td>Stroke</td>
<td>1mm</td>
<td>1mm</td>
<td>1mm</td>
</tr>
<tr>
<td>Stroke Rate</td>
<td>60rpm</td>
<td>60rpm</td>
<td>60rpm</td>
</tr>
</tbody>
</table>

[Application example]

Screw Driving Robot using the FF311DR

Screw Driving Robot using the FF503H

Screw Driving Robot using the FF801H

Example of machine configuration.
For precision screws and micro screws
Disk Type Micro Screw Feeder DF200
Solution for Precision and Micro Screws

Simple mechanism which is using rotary disk system.
High efficiency is achieved because of very low incidence of jamming.

Easy operation
Disk can be changed to feed different diameter screws.
Any screw with the same shaft diameter, no matter the head size or thread type, can be fed with the same disk.

Installation in automatic lines
Efficient feeding guarantees no stoppage due to feed faults. Efficient screw feeding prevents line stoppage due to screw feeding fault. External I/O signals can also be used.

Precision screw/needle feeding
0.6 mm dia. top head, short length, micro screw, and other screws, with captive washers can be fed.

Compact Drum Type Screw Feeder FF311DR
The solution for screws with captive springs and plain washers

A simple mechanism that lines up screws on the chute rail, draws screw jamming and stub screws. This model is recommended if you use screws with captive springs and plain washers in PWB assembly.

Easy operation
Remove screws easily by using screw easy.

Screws with captive springs and plain washers rarely jam.

Compact body
Compact body can be placed almost anywhere on the production line.

Standard Centerboard Type Screw Feeder FF503H・FF801H
Higher-quality screw feeding!

Blows, nuts, pins, steel bolts, etc., can also be fed as well as screws and bolts. The compact body design enables installation almost anywhere and easy multipositioning.

Quickly Blow Feed Screws
Single screw feed on a dual feed screw feeding head.

Horizontal linear feeding minimizes jamming.

Installation feed screws to the header end.

Specifications

[Application example]

DF200

Applicable screws

Applicable screws

Screw Driving Robot equipped with 6-500E arms

Screw Driving Robot equipped with the DF200

Specifications

[Application example]

FF311DR

Applicable screws

Applicable screws

Multi Screw Driving Machine using the FF311DR

Specifications

[Application example]

FF503H

Applicable screws

Applicable screws

Screw Driving Robot using the FF503H

Specifications

[Application example]
Auxiliary hopper for less frequent screw filling (Optional)

Separate installation space is not needed. The hopper is directly mounted on the screw feeder and does not need as much installation space needed by a conventional auxiliary hopper.

Easy screw filling The barrel is removable.

Low noise The motor-driven hopper generates very low running noise.

Easy mounting and dismounting The hopper is a hanger type and can be easily mounted and dismounted.

Specifications

<table>
<thead>
<tr>
<th></th>
<th>SH200</th>
<th>SH300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model number</td>
<td>FF801H</td>
<td>FF311DR, FF503H</td>
</tr>
<tr>
<td>Hopper capacity</td>
<td>Approx. 2000 mL</td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td>AC100V 50/60Hz</td>
<td>24 VDC (from feeder FF/FM503H)</td>
</tr>
<tr>
<td>Drive source</td>
<td>Induction motor</td>
<td>Stepping motor</td>
</tr>
<tr>
<td>Hopper action detection</td>
<td>Proximity switch</td>
<td></td>
</tr>
<tr>
<td>Paint color</td>
<td>Hammertone blue</td>
<td></td>
</tr>
<tr>
<td>Machine weight</td>
<td>Approx. 4.5 kg</td>
<td></td>
</tr>
</tbody>
</table>

Note 1: Screw length is 30 mm or less and nominal dia., M2-M5.

Outside Dimension

Application example

- **FF311DR+SH300**: The hopper is mounted on the FF311DR top or rear in accordance with the mounting space.
- **FF503H+SH300**: 
- **FF801H+Auxiliary hopper**: Hopper capacity is 5 L or 30 L.

Handheld screw driving tool

Handheld types comprising feeders and fastening units are also available.

FEEDMAT

FM311DR-BL

FM503H-BL

FM503H

FM801H

NITTO SEIKO CO., LTD.
Machinery Division

Website: [https://www.nittoseiko.co.jp/](https://www.nittoseiko.co.jp/)

Global sales head office
2, Shiroyama-cho, Ayabe-city, Kyoto 623-0003, Japan
Tel. +81-773-42-1290 Fax. +81-773-43-1553

*Specifications and other matters are subject to modifications for performance improvements without notice.

*Trade names like the product names indicated in this brochure are registered or not registered trademark of each company.