Catalog Information Guide

The descriptions of the AC and DC fans and blowers appear on the product pages as shown below. Contact NIDEC SERVO if clarification or further information is desired.
High customer satisfaction achieved thanks to our quiet and energy efficient products with unsurpassed reliability and customizability.

Focusing on product development for computer-related equipment, the compact axial fans from NIDEC SERVO are the result of technological innovations that minimize noise to the greatest possible extent. NIDEC SERVO’s product designs incorporate several industry firsts, including specially molded 3-dimensional blades, and GentleTyphoon fans with a unique blade shape. Market requirements are always researched and catered to in advance; meaning customers always receive products that perform well ahead of market rivals.

● Versatile lineups of axial fans and centrifugal blowers
  Fans for high static pressure applications are also supplied as standard products.

  The aerodynamic characteristics required for fan motors differ depending on the equipment in which they are installed, but may roughly be grouped into airflow focus and pressure focus types respectively. The axial fans and centrifugal blowers (also called “centrifugal fans” and “sirocco fans”), as fan motors of NIDEC SERVO, fall into both the former and latter categories. Recently, NIDEC SERVO has also developed pressure focus type axial fans, suitable for use in high static pressure regions, in response to diverse customer requirements.

  As its name implies, an axial fan generates airflow in the motor axial direction. Airflow can be generated cylindrically by the propeller from the entire diameter of the fan, allowing considerable airflow generation. The axial fan sucks in air and pushes it out through the propeller blades, without large pressure (static pressure) output.

  The centrifugal blower, on the other hand, recovers the airflow released by the impeller blades in a centrifugal direction from the motor shaft center via the scroll casing (also called a “housing” or “frame”) and discharges it unidirectionally. This system effectively converts a centrifugal force into pressure, increasing the pressure (static pressure) to blow the air. However, only a limited airflow passes through the impeller, preventing a large airflow from being obtained.

  NIDEC SERVO refers to the former as fans and the latter as blowers, to easily distinguish the differences between the two types.

  In addition to these two types, NIDEC SERVO has recently released axial fans with features resembling those of the blower (high static pressure region fans, e.g. the G1751M series). These fans are attracting the attention of the IT industry and are highly rated as quiet products, capable of saving energy with high-impedance equipment, with which conventional axial fans have not been efficient.

● Our ceaseless quest to reduce noise

  NIDEC SERVO continues to introduce a never ending series of quiet products to the market. People know to talk to NIDEC SERVO if low noise is a priority, and that reputation has grown over many years. Day and night, NIDEC SERVO is active in the research and development of low noise technology. NIDEC SERVO also swiftly introduced computational fluid dynamics (CFD) to deliver quiet fans and blowers that customers can use without worrying about designing noise reduction measures into their application.

● Versatile lineup of energy saving products

  The power consumption of fans may be problematic with some high airflow products and with large fans and blowers. When several units are used, a high capacity power source must be installed. NIDEC SERVO markets a large variety of high-efficiency fan motors that can reduce the power capacity required for such machines.

Only highly reliable products are delivered to customers

With product liability in mind, it is the logical responsibility of manufacturers to supply highly reliable products that can be used by customers without any product safety worries. Products with new designs are only supplied to the market after their viability has been verified by subjecting them to various reliability tests and proving that they are problem-free. Moreover, only high-reliability parts are used in the drive circuits of DC fans and blowers. NIDEC SERVO develops and designs products by specifying the strictest derating level in the industry.

Customized and semi-customized product specifications

Products are supplied in optimum customized form for bulk purchases. NIDEC SERVO is capable of swiftly accomplishing optimum designs by fully exploiting CFD technology. NIDEC SERVO will propose optimum semi-customized fans and blowers by combining its large variety of customized parts. Let NIDEC SERVO devise a suitable solution to meet your requirements.

All NIDEC SERVO catalog products conform to the EU RoHS Directive

All NIDEC SERVO products conform to the EU RoHS Directive by restricting the contents of six specified hazardous substances (lead, mercury, cadmium, hexavalent chromium, PBD and PBDE) to below tolerable values. (All products produced from the beginning of January 2006 meet the RoHS Directive. Certain standard inventory products may include those produced in and before December 2005. Please specify in your purchase orders that only RoHS-compliant products should be shipped.) NIDEC SERVO is also active in reducing another 18 hazardous substances.

AC and DC fans

One of the prominent advantages of AC fans is the fact that they can be directly connected to an AC power supply. The DC fan boasts high motor efficiency and is power-saving, as well as generating less heat, allowing the weight of the motor and vent unit to be reduced.

AC fans and blowers use AC induction motors and are suitable for constant speed operation. DC fans and blowers, meanwhile, use DC brushless motors and can have highly variable airflow. By varying the voltage supply, the speed is also easily adjustable. Standard DC fans and blowers regulated by variable-speed control are also available. See pages G-51 for further details.

[Principal applications]

● Computers and peripheral terminal equipment ● Servers
● Personal computers ● Copiers ● Audio equipment
● Broadcasting equipment ● Communication equipment
● Industrial equipment ● Medical equipment ● Game machines

Motor Selection Guide (Fans)

AC/DC Axial Fans & Blowers

Axial
Centrifugal
Silent
Axial
Centrifugal

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Selection from external dimensions and max. airflow

<table>
<thead>
<tr>
<th>AC/DC</th>
<th>External Dimensions mm(inch)</th>
<th>Series</th>
<th>Page in Catalog</th>
<th>Max. airflow (m³ / min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC</td>
<td>60x25 (2.4&quot;x1.0&quot;)</td>
<td>TUDC</td>
<td>G-17</td>
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<tr>
<td>DC</td>
<td>80x25 (3.2&quot;x1.0&quot;)</td>
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<tr>
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<td>D925C (GentleTyphoon)</td>
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<td>DC</td>
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<td>KLDG</td>
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<tr>
<td>DC</td>
<td>92x38 (3.6&quot;x1.5&quot;)</td>
<td>G938B</td>
<td>G-34</td>
<td></td>
</tr>
<tr>
<td>DC</td>
<td>120x25 (4.7&quot;x1.0&quot;)</td>
<td>D1225C (GentleTyphoon)</td>
<td>G-23</td>
<td></td>
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<tr>
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<td>120x25 (4.7&quot;x1.0&quot;)</td>
<td>D1225C (for High speed applications)</td>
<td>G-23</td>
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<td>172x150x51 (6.8&quot;x2.0&quot;)</td>
<td>PA</td>
<td>G-61</td>
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</tbody>
</table>

Model code for DC fans and blowers (15-digit code)

- **D** 12 38 B 24 B 5 A Z - 00
  - **Stage** Customized code
  - **A** 00: Standard type
  - **A** 1: Standard type (Model change product)
  - **A** 04: 4P Terminal type
  - **B** Rotation sensor:
  - **S**: Lock detection type
  - **Q**: Speed detection type
  - **R**: Speed detection type (Output reversion type)
  - **P**: Pulse output type
  - **Z**: No sensor (Standard type)
  - **C** Special code:
  - **A**: Standard type
  - **C**: Higher moisture resistance
  - **Y.Z**: Variable speed
  - **B**: Ball bearing
  - **F**: Frame type:
  - **B**: Square metal venturi
  - **C**: Square resin venturi with ribs
  - **D**: Square resin venturi without ribs
  - **E**: Black painted type B
  - **F**: Round metal venturi
  - **R**: Round plastic venturi
  - **K**: Reverse rotation spiral casing

Manufacturing lot No.

- **9 A 25**
  - **9**: Date manufactured
  - **A**: Month manufactured: A ~ L = January ~ December
  - **25**: Year manufactured (Last digit of year)
Motor Selection Guide (Blowers)

Selection from external dimensions and max. airflow

<table>
<thead>
<tr>
<th>AC/ DC</th>
<th>External Dimensions mm (inch)</th>
<th>Series</th>
<th>Page in Catalog</th>
<th>Max. airflow (m² / min)</th>
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</thead>
<tbody>
<tr>
<td>DC</td>
<td>□48x25 (□1.9&quot;x1.0&quot;)</td>
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<tr>
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<td>G-49</td>
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</table>

Model code for DC axial fans and blowers

(Please refer to previous Axial Flow Fans and Blowers)

Model code for AC axial fans

(Please refer to previous Axial Flow Fans)

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