## Compact size axial flow fan

<table>
<thead>
<tr>
<th>K25DSF1</th>
<th>K28DSR</th>
<th>K28DSM</th>
<th>K35DSM</th>
<th>K40DSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>K40DTL</td>
<td>K40DSH</td>
<td>K40DTH</td>
<td>K45DST</td>
<td>K45DTT</td>
</tr>
<tr>
<td>K45DSL</td>
<td>K45DTL</td>
<td>K45DTH</td>
<td>K55DTL</td>
<td>K55DTH</td>
</tr>
</tbody>
</table>

## Low noise type compact size axial flow fan

<table>
<thead>
<tr>
<th>K25USF1</th>
<th>K28USR</th>
<th>K28USM</th>
<th>K35USM</th>
<th>K40USL</th>
</tr>
</thead>
<tbody>
<tr>
<td>K40UTL</td>
<td>K40USH</td>
<td>K40UTH</td>
<td>K45UST</td>
<td>K45UTT</td>
</tr>
<tr>
<td>K45USL</td>
<td>K45UTL</td>
<td>K45UTH</td>
<td>K55UTL</td>
<td>K55UTH</td>
</tr>
</tbody>
</table>

Thank you for purchasing the **KDK** Compact or Low noise type compact size axial flow fans. Please be sure to always follow the details of these instructions in installing and using your unit, otherwise sudden accidents or breakdowns will occur. Hence, we strongly urge both the installer and the final user to read these instructions carefully so that the unit can be used safely throughout its service life.
1. Installation Cautions

- Observe the following precautions as to the place of installation and the installation procedure.

Avoid a location susceptible to high temperatures over 40° degree. 
( Trouble may be caused and the motor life may be shortened.

Avoid a location susceptible to too much soot.

Install securely. (Otherwise noise and vibration may be generated.

Install a fan protection device like a motor over load breaker in the wiring.

The room shall have an air supply port for effective ventilation.

Provide an access door for inspection and maintenance.

Do not use the fan in the place where humidity is high.

Never install the fan upside down or vertically.

Connect the duct avoiding the following cases.

1. Sharp bending angle. 
2. Bended more than once.
3. Reduced diameter at the connection.
4. Bending near the discharge port or suction port.

When connecting an electric flow rate control unit (inverter, slidac, etc.) be sure to check the safety of the equipment. (The motor may be burned.)

Do not supply power of an incorrect rating. Be careful not to wire incorrectly.

The fan is for indoor use. Avoid the location exposed to direct sunshine or rain.

Do not repeat starting and stopping. (Otherwise the fan may deteriorate.

12 times or less per day

2. Names and Dimensions of Components

Compact size axial flow fan

K25DSF1

Dimensions (mm)

<table>
<thead>
<tr>
<th>No.</th>
<th>Parts name</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Casing A</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Casing B</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Motor</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Wheel</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Guide vanes</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Hanger fittings</td>
<td>2</td>
</tr>
</tbody>
</table>
Compact size axial flow fan

K28DSR K28DSM K35DSM K40DSL K40DTL K40DSH K40DTH
K45DST K45DTT K45DSL K45DTL K45DTH K55DTL K55DTH

<table>
<thead>
<tr>
<th>Model number</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>Qty</th>
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<tbody>
<tr>
<td>K28DSR, K28DSM</td>
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<td>197</td>
<td>22</td>
<td>248</td>
<td>400</td>
<td>366</td>
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<tr>
<td>K35DSM</td>
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<td>426</td>
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<tr>
<td>K40DSL, K40DTL, K40DSH, K40DTH</td>
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<tr>
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<td>218</td>
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<td>394</td>
<td>588</td>
<td>554</td>
<td>546</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>K55DTL, K55DTH</td>
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<td>25</td>
<td>445</td>
<td>673</td>
<td>639</td>
<td>631</td>
<td>10</td>
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</table>

Low noise type compact size axial flow fan

K25USF1

<table>
<thead>
<tr>
<th>Model number</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>K28USR, K28USM</td>
<td>882</td>
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<td>77</td>
<td>205</td>
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<td>400</td>
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<tr>
<td>K35USM</td>
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<td>606</td>
<td>102</td>
<td>240</td>
<td>21.5</td>
<td>30</td>
<td>298</td>
<td>299</td>
<td>460</td>
</tr>
<tr>
<td>K40USL, K40ULT, K40USH, K40UTH</td>
<td>1049</td>
<td>571</td>
<td>137</td>
<td>341</td>
<td>26</td>
<td>30</td>
<td>347</td>
<td>347</td>
<td>525</td>
</tr>
<tr>
<td>K45UST, K45UTT, K45USL, K45ULT, K45UTH</td>
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<td>161</td>
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<td>30</td>
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<td>396</td>
<td>588</td>
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<tr>
<td>K55ULT, K55UTH</td>
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<td>231</td>
<td>588</td>
<td>25</td>
<td>30</td>
<td>445</td>
<td>447</td>
<td>673</td>
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</tbody>
</table>

Dimensions (mm)

Detail of hanger fittings

Applied model number

K28DSR K28USR
K35DSM K28USM
K40DSL K40USL K40DTL K40UTH
K45DST K45USL K45DTL K45UTH
K55DTL K55USL K55DTL K55UTH

No. Parts name Qty
1. Casing A 1
2. Casing B 1
3. Motor 1
4. Wheel 1
5. Guide vanes 7
6. Hanger fittings 4
7. Terminal cover 1

Dimensions (mm)

No. Parts name Qty
1. Casing A 1
2. Casing B 1
3. Motor 1
4. Wheel 1
5. Guide vanes 4
6. Hanger fitting 4
7. Sound absorbing material 4
8. Side panel assy 2
9. Duct assy 2

No. Parts name Qty
1. Fan body 1
2. Motor 1
3. Wheel 1
4. Sound absorbing material 1
5. Duct assy 1
6. Side panel assy 1
7. Cover 1
8. Plastic rivet 1
9. Hanger fittings 4
10. Terminal cover 1

Model number

K28DSR K28USR
K35DSM K28USM
K40DSL K40USL K40DTL K40UTH
K45DST K45USL K45DTL K45UTH
K55DTL K55USL K55DTL K55UTH

Plastic rivet Qty.

12
3. Maintenance Cautions

Perform maintenance inspection and cleaning approximately once a year so that the fan is operated safely for a long time. It is recommended that the maintenance inspection should be conducted by the subcontractor of the electrofan to prevent the fan from having any accident due to damaged parts deriving from aging and ensure long life and safe operation of the fan.

3-1 Replacement parts

Motor bearing (Supposed service life: about 20,000 hours)
The bearing service life depends on how it is used.
Renew the bearing every time when an abnormal sound is heard.

<table>
<thead>
<tr>
<th>Model number</th>
<th>D-end</th>
<th>Non-D-end</th>
</tr>
</thead>
<tbody>
<tr>
<td>K26DF1, K26USF1</td>
<td>6200ZZ</td>
<td>6200ZZ</td>
</tr>
<tr>
<td>K26SDS, K26USR</td>
<td>6200ZZ</td>
<td>6200ZZ</td>
</tr>
<tr>
<td>K26SDS, K26USM</td>
<td>6200ZZ</td>
<td>6200ZZ</td>
</tr>
<tr>
<td>K36DTS, K36UST</td>
<td>6200ZZ</td>
<td>6200ZZ</td>
</tr>
<tr>
<td>K46DTS, K46UST</td>
<td>6200ZZ</td>
<td>6200ZZ</td>
</tr>
<tr>
<td>K46DTS, K46UST</td>
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</tr>
<tr>
<td>K46DTS, K46UST</td>
<td>6200ZZ</td>
<td>6200ZZ</td>
</tr>
</tbody>
</table>

3-2 Overhauling procedure

When overhauling is necessary, like in the case when the motor has to be changed, observe the following procedure. (Be sure to wear gloves for safety)

1. Turn off the power supply switch/breaker first.
2. Disconnect the power supply wiring. (There is no connecting terminal for K26DF1 and K26USF1)

3. Disassemble the body into each part.
   (Compact size axial flow fan)
   (Follow the sequence according to the number described as below)
   K26UST is different from this construction

4. Placing rivet

5. Use the disassembled part

6. Assemble each part in order.

7. Hanger fitting

Disassemble in order
1. Terminal cover
2. Hanger fitting
3. Silencer
4. Plastic rivet
5. Silencer to casing B assy.
6. Plastic rivet

Plastic rivet set (included in package)

Casing A assy.
Casing B assy.
Silencer

Use a regular screwdriver.
Casing B assy.
4. After-sale Service

(1) Trouble shooting
Examine the following table to determine and rectify the problem. If the fan still does not work, disconnect power source and contact the local dealer.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Inadequate air flow</th>
<th>Excessive noise</th>
<th>Excessive vibration</th>
<th>Overheated motor</th>
<th>Countermeasure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor foundation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Reinforce foundation</td>
</tr>
<tr>
<td>Faulty installation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Recheck installation</td>
</tr>
<tr>
<td>Reverse fan rotation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Change motor wiring</td>
</tr>
<tr>
<td>Inadequate fan speed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Check power source</td>
</tr>
<tr>
<td>Contact between rotary and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Inspection</td>
</tr>
<tr>
<td>stationary parts</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impurities sucked in/dust</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>inspection/cleaning</td>
</tr>
<tr>
<td>adherence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faulty ducting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Duct inspection</td>
</tr>
</tbody>
</table>

(2) Replacement parts kept for at least six years
The company will have available replacement operational parts for the Compact or Low noise type compact size axial flow fans for at least six years after these models are no longer sold. Operational parts refer to those parts which are essential for maintaining the functions of the Product.

(3) Complete after-sale service
If you have any questions about maintenance or other after-sale services, please inquire where you purchased your unit.

5. Specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>Model number</th>
<th>Power supply</th>
<th>Number of poles</th>
<th>Output (W)</th>
<th>Frequency (Hz)</th>
<th>Air volume (m³/min)</th>
<th>Input (W)</th>
<th>Noise level (dB)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Casing side</td>
<td>Suction side</td>
<td>Discharge side</td>
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<tr>
<td>Compact fan</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>K2DSPF1</td>
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<td>4</td>
<td>25</td>
<td>50Hz</td>
<td>50Hz</td>
<td>550</td>
<td>40</td>
<td>80.46</td>
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<td>10</td>
<td>50Hz</td>
<td>724</td>
<td>642</td>
<td>41</td>
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<tr>
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<td>20</td>
<td>50Hz</td>
<td>1720</td>
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<td>50Hz</td>
<td>2894</td>
<td>2765</td>
<td>44</td>
<td>39.5</td>
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<td>K100T</td>
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<td>4</td>
<td>200</td>
<td>50Hz</td>
<td>2943</td>
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<td>4706</td>
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<td>700</td>
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<td>4706</td>
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<td>39.5</td>
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<td>700</td>
<td>50Hz</td>
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<td>900</td>
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<td>50Hz</td>
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<td>50Hz</td>
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<td>5565</td>
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<td>K100TH</td>
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<td>1,500</td>
<td>50Hz</td>
<td>6108</td>
<td>5808</td>
<td>44</td>
<td>39.5</td>
<td>23.0</td>
</tr>
</tbody>
</table>

(Note) 1. Values are specified at the static pressure of 0 Pa.
2. The air volume is measured according to the chamber method (JIS C 9063).
3. Noise: suction side—Noise level measured at 1.5m from the suction side.

Discharge side—Noise level measured at 1.5m from the side of the fan.

Noise measurement conditions
The suction side of the fan is equipped with a bellmouth and the discharge side is equipped with a duct (2D).

6
1. Precautions During Installation

- Check the following.
  - Is there any breakage or deformation?
  - Is the product as per your order?
  - Name plate
- If any error is found, please contact the dealer you purchased from.

2. Installation

- Connect the circular duct to the adaptor by taping.
- Connect the rectangular duct with a flexible joint of non-flammable material such as a canvas cloth.

*Install Low noise type compact size axial flow fan according to Compact size axial flow fan.

Wiring Cautions (With silencer installed on the discharge side)

Follow the sequence according to the number described as below:

A Detailed view
For single phase

1. Remove the from silencer.

For three phase

2. Cut the grommet of the cover to pass the power cable through it.

3. Connect the power cable to the terminal block according to the connection diagram.

4. Tighten the cover with screws the same as it was tightened before.

※There is no connecting terminal for K25DSF1 and K25USF1
3. Electric Wiring Cautions

Ask the electrical shop for wiring.
- To the electrical shop who makes wiring.
- Kindly work in accordance with the electric equipment engineering standards and the working standard specified by the power company.
- According to the electrical installation standard, perform the grounding work.
- Connect the line after opening the terminal cover.
- Kindly connect as indicated in the following drawings.
- After wiring, check the rotation direction.
- For K55DTL and K55UTL, which do not have two-speed motor, connect the red, white and black lines to the R, S and T terminals, respectively.

**WIRING DIAGRAM (SINGLE PHASE)**
- K25DSF1
- K28DSR
- K28DSM
- K35DSM
- K40DSL
- K40DSH
- K45DSST
- K45DSL
- K25USF1
- K28USR
- K28USM
- K35USM
- K40USL
- K40USH
- K45UST
- K45USL

**WIRING DIAGRAM (THREE PHASE)**
- K40DTL
- K40DTH
- K45DTT
- K45DTL
- K45DTH
- K55DTH
- K40UTL
- K40UTH
- K45UTT
- K45UTL
- K45UTH
- K55UTH

* There is no connecting terminal for K25DSF1 and K25USF1.