

Installation Guide for JET NOZZLE DIFFUSER

Model: D500 Jet Nozzle (Aluminum Alloy with Radial Damper)

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1. Tools and Materials Required

- Adjustable wrench
 - Screwdriver set
 - Measuring tape
 - Leveling tool
 - Sealant (compatible with aluminum)
 - Mounting brackets (as per duct size)
 - Safety gloves and goggles
 - Bolts, rivets, and gaskets (for flange connections)
 - Standard pipe sections or hoses (for direct connections)
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2. Pre-Installation Checks

1. Inspect the Nozzle:

- Verify the material (aluminum alloy) and ensure no damage to the radial damper or surface.
- Check surface treatment for corrosion resistance.

2. Confirm Dimensions:

- Ensure duct opening matches the nozzle's D500 specification.
- Note the tolerance for unmachined dimensions: ± 5 mm.

3. Prepare the Workspace:

- Clear obstructions around the installation area.
- Ensure electrical/piping systems near the duct are safely isolated.

3. Installation Steps

Step 1: Mounting Bracket Installation

1. Align brackets with pre-drilled holes on the duct.
2. Secure brackets using appropriate fasteners.

Step 2: Nozzle Positioning

1. Place the nozzle into the duct opening, ensuring the radial damper faces the intended airflow direction.
2. Adjust the nozzle horizontally/vertically using a leveling tool.
3. Maintain a positional tolerance within ± 5 mm from the designated centerline.

Step 3: Securing the Nozzle

1. For Flange Connection (Square or Round Duct):
 - Ensure the un-drilled circular flange around the nozzle is flanged.
 - Secure the nozzle to the duct using bolts or rivets.
 - Place a gasket between the nozzle and duct to ensure an airtight seal.
2. For Direct Connection to Duct or Hose:
 - Use a standard pipe section or hose with matching diameter.
 - Connect the nozzle directly to the duct/hose and fasten with clamps.

Step 4: Alternative Mounting Options

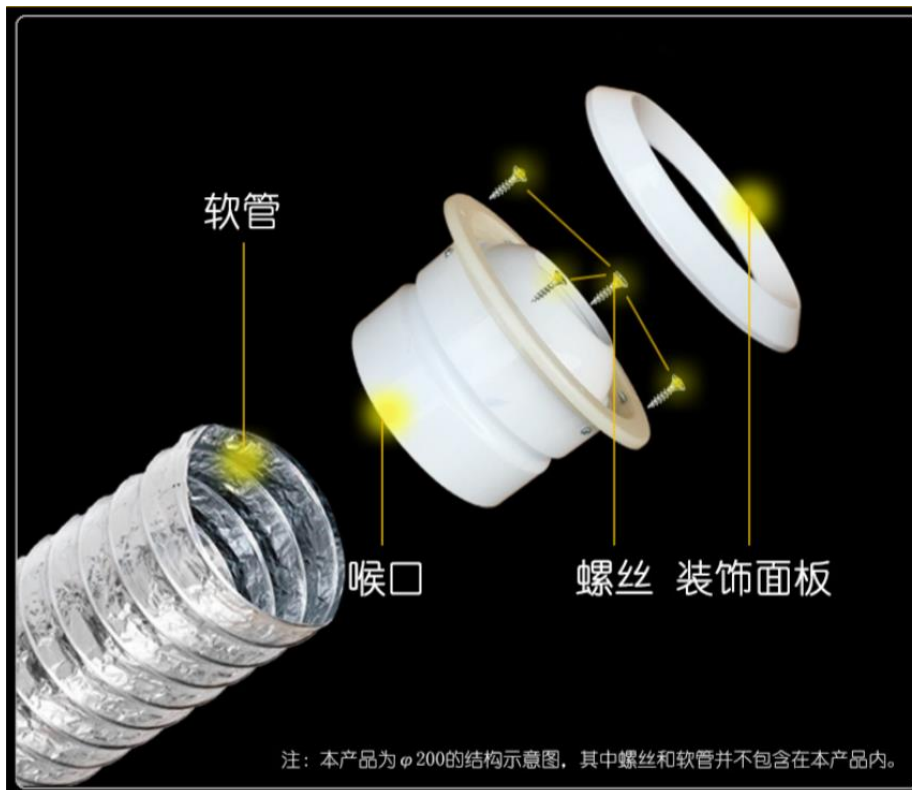
1. Header Box Installation:
 - Insert the nozzle into a header box and secure it with bolts.
2. Duct Wall Mounting:
 - Bolt the nozzle directly to the duct wall.
 - Cover exposed bolts with the provided decorative panel using a twist-lock mechanism for easy installation/removal.

Step 5: Radial Damper Adjustment

1. Test the damper's movement by rotating the control lever.
2. Set the damper to the desired airflow angle (e.g., fully open, partially closed).

Step 6: Final Inspection

1. Confirm all fasteners are tightened.
2. Check for air leaks using a smoke pencil or airflow sensor.
3. Verify smooth operation of the radial damper.



4. Safety and Maintenance

- Safety Precautions:
 - Wear gloves to avoid sharp edges.
 - Do not exceed the nozzle's maximum pressure rating.
- Maintenance:
 - Clean the nozzle surface periodically with a non-abrasive cloth.
 - Lubricate the damper hinge annually with silicone-based grease.