



23 37 XX – High Performance Architectural Diffusers

KAM – Aluminum Adjustable Long Throw Jet Nozzle Diffusers (Manual Adjustment)

PART 1 – GENERAL

1.1 SUMMARY

- A. Adjustable long throw jet nozzle supply diffuser(s) designed for large spaces and high ceilings; suitable for heating and cooling with directional flexibility.
- B. Manual adjustment: adjustable core rotates to redirect the air jet direction.
- C. Mounting types:
 - 1. KAM-W: Surface mounted; includes a removable rim to conceal mounting screws after installation.
 - 2. KAM-D: Duct mounted.
- D. Construction: aluminum.
- E. Finish: factory powder coated (TGIC-free), white RAL 9016 unless otherwise scheduled.

1.2 SUBMITTALS

- A. Product Data: Manufacturer's data for scheduled model(s), neck size(s), and mounting type(s), including:
 - 1. Free area and recommended minimum/maximum airflow.
 - 2. Pressure loss and diffuser-generated NC.
 - 3. Throw data with ceiling effect (Coanda) and without ceiling effect (as published).
 - 4. Temperature differential correction factors for throws (as published).
 - 5. Installation/mounting details and manual adjustment description.
- B. Shop Drawings: Indicate model designation, mounting type (surface mounted or duct mounted), neck size, finish, and installation details. For -W models, indicate removable rim detail.
- C. Airflow Prediction Report (Required – SelectiV): Provide a manufacturer-generated SelectiV airflow prediction report for each diffuser type and each distinct room condition using manufacturer performance data and recognized airflow physics corrections (ΔT correction factors, Coanda effects, buoyancy effects, jet interaction, and wall/floor/ceiling collision effects). Report shall include:
 - 1. 3D room model with diffuser locations.

2. Predicted airflow visualization views: plan (top), section (side), elevation (front).
3. Throws for terminal velocities of 150, 100, 60, 50, 40, 30, and 20 fpm.
4. Pressure loss at scheduled airflow.
5. Diffuser-generated NC at scheduled airflow.
6. Perceived NC at room center (5 ft height) from all sources combined across 63–8000 Hz octave bands; include key assumptions used.

D. Verified CFD Validation (When Indicated): Provide EffectiV Verified CFD validation and summary report for spaces indicated and/or when operation is outside published selection limits.

1.3 SUBSTITUTIONS

A. Substitutions per Division 01. Proposed equals shall provide a line-by-line compliance matrix including all Part 1 deliverables, including the SelectiV Airflow Prediction Report deliverables.

PART 2 – PRODUCTS

2.1 BASIS OF DESIGN

A. EffectiV KAM aluminum adjustable long throw jet nozzle diffuser, manually adjustable.

2.2 MODELS AND MOUNTING (AS SCHEDULED)

A. KAM-W: Surface mounted; removable rim to conceal screws after installation.

B. KAM-D: Duct mounted.

2.3 SIZES AND AIRFLOW (AS SCHEDULED)

A. Provide scheduled neck size(s) within published ranges:

1. 5 in (125 mm): 16–129 cfm
2. 6 in (160 mm): 26–179 cfm
3. 8 in (200 mm): 54–303 cfm
4. 10 in (250 mm): 100–465 cfm
5. 12 in (315 mm): 191–665 cfm
6. 16 in (400 mm): 294–897 cfm

2.4 MATERIALS AND FINISH

A. Construction: aluminum.

B. Finish: factory powder coated (TGIC-free), white RAL 9016 unless otherwise scheduled.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Install per manufacturer instructions; coordinate mounting type and jet direction per design intent.

B. For -W models, install removable rim after fastening to conceal screws.

3.2 ADJUSTING

A. Balance to scheduled airflow.

B. Manually adjust core to achieve required jet direction.