



23 37 XX – High Performance Architectural Diffusers

AX6-MA – Adjustable Aluminum Round Swirl Diffuser (Manual)

PART 1 – GENERAL

1.1 SUMMARY

A. Adjustable round swirl supply diffuser(s), manual blade adjustment, for heating/cooling/ventilation applications.

1.2 SUBMITTALS

A. Product Data: Manufacturer's data for AX6-MA including dimensions, neck sizes, free area, airflow range, pressure loss, throws, and NC.

B. Shop Drawings: Show mounting details, diffuser configuration, and any optional accessories.

C. **Airflow Prediction Report (Required):** Submit manufacturer-generated room airflow prediction report for each diffuser type and unique room condition using manufacturer performance data and recognized correction methods (ΔT correction factors, Coanda effect, buoyancy effect, jet interaction, and wall/floor/ceiling collision effects). Report shall include:

1. 3D room layout with diffuser placement.
2. Predicted airflow visualization views: plan (top), section (side), elevation (front).
3. Throw distances for terminal velocities of **150, 100, 60, 50, 40, 30, and 20 fpm**.
4. Pressure loss at scheduled airflow.
5. NC at scheduled airflow.
6. **Perceived NC:** sound pressure at room center (5 ft height) from all sources combined across **63–8000 Hz** octave bands; include resulting NC and key assumptions used.

D. **Verified CFD Validation (When Indicated):** Provide EffectiV Verified CFD validation and summary report for spaces indicated on drawings and/or when diffuser operation is outside manufacturer published selection limits (airflow, ΔT , mounting height, geometry).

1.3 SUBSTITUTIONS

A. Substitutions per Division 01.

B. Proposed equals shall provide a line-by-line compliance matrix including all submittal deliverables in 1.2, including the Airflow Prediction Report.

PART 2 – PRODUCTS

2.1 BASIS OF DESIGN

A. **EffectiV AX6-MA** adjustable aluminum round swirl diffuser with **synchronously adjustable blades, manually operated**, with **integrated air equalizer**.

2.2 PERFORMANCE / APPLICATION LIMITS

A. Suitable for ceilings **8.5 ft (2.6 m) and higher** and temperature differential up to **27°F (15°C)**.

B. Provide neck sizes and airflow ranges as scheduled; select within published min/max CFM for each neck size.

2.3 MATERIALS AND CONSTRUCTION

A. **Heavy-gauge spun aluminum construction**.

B. Blades shall be synchronously adjustable to vary airflow from horizontal to vertical projection.

2.4 FINISH

A. Factory powder coat finish, **TGIC-free**, color **white M9016** unless otherwise scheduled.

2.5 ACCESSORIES (AS SCHEDULED)

A. Optional security grille **CH6** where indicated (sports facilities).

B. Integrated air volume damper where scheduled (options include MRT2 manual cable-operated damper and EB2 battery-operated electro-balance damper).

PART 3 – EXECUTION

3.1 INSTALLATION

A. Install per manufacturer instructions.

B. Verify blade adjustment accessibility for manual operation.

3.2 ADJUSTING

A. Set diffuser blade angle per design intent (heating vs cooling mode) and balance to scheduled airflow.