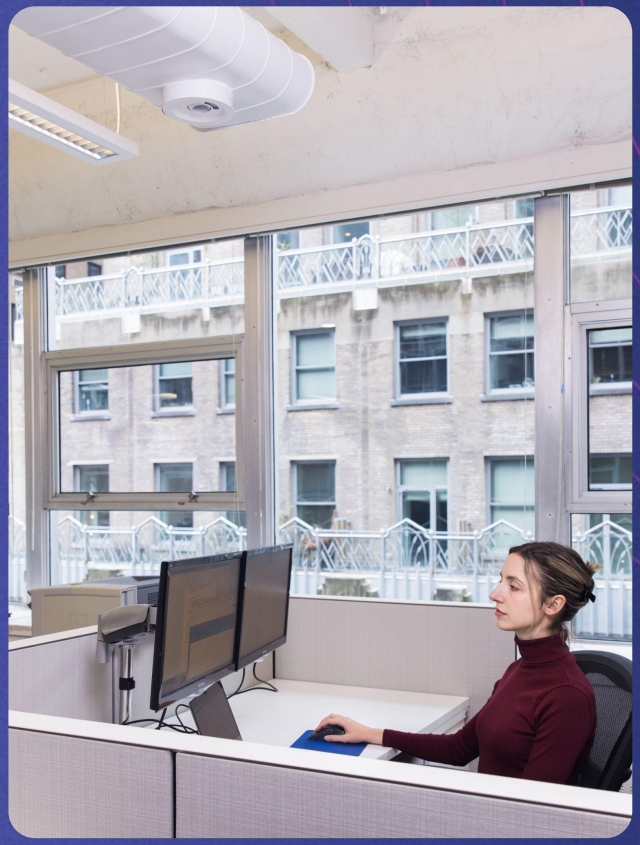
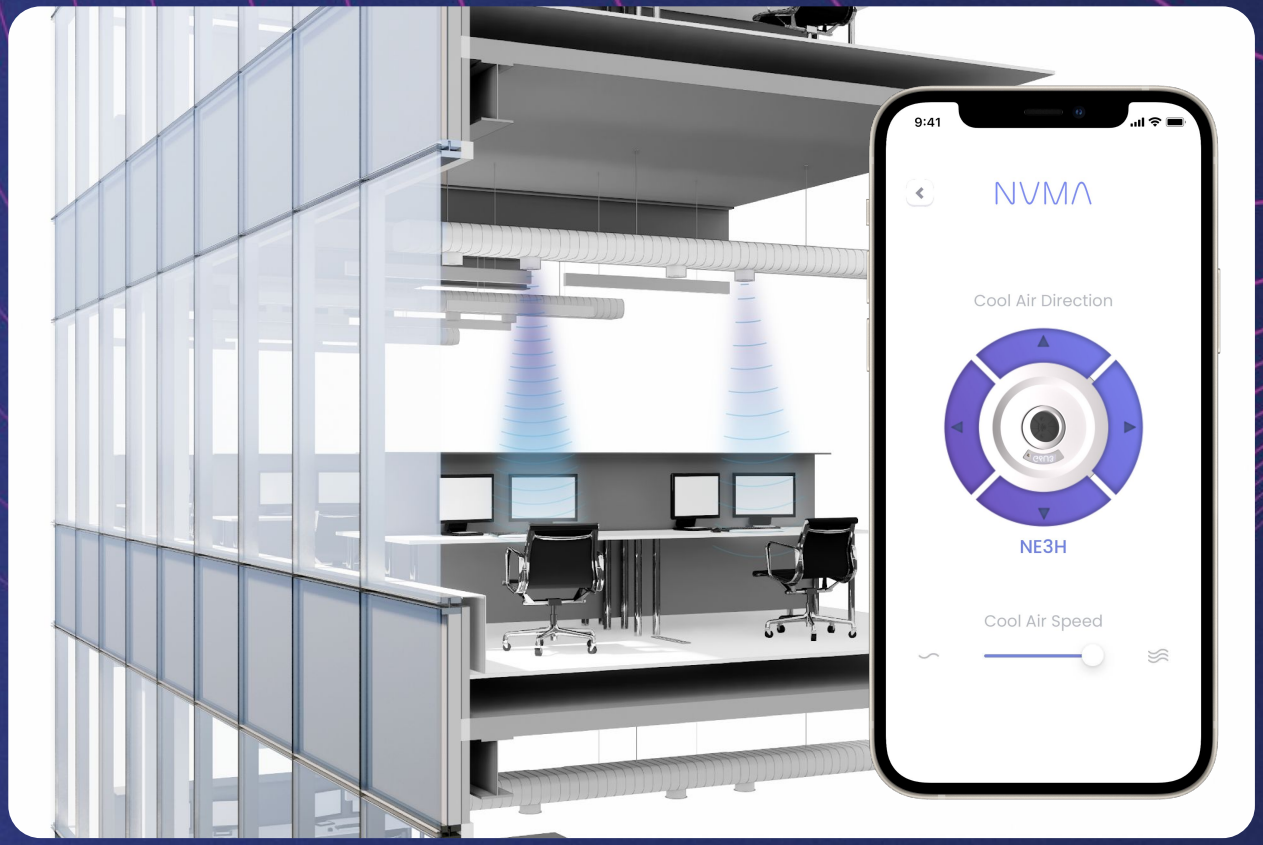
NVMA

Application Guide

The Numa-I is a personal air outlet that can be controlled via Mobile app. The device controls air flow and direction from a central air distribution system to provide personal temperature control and ventilation.





Laying Out Numa

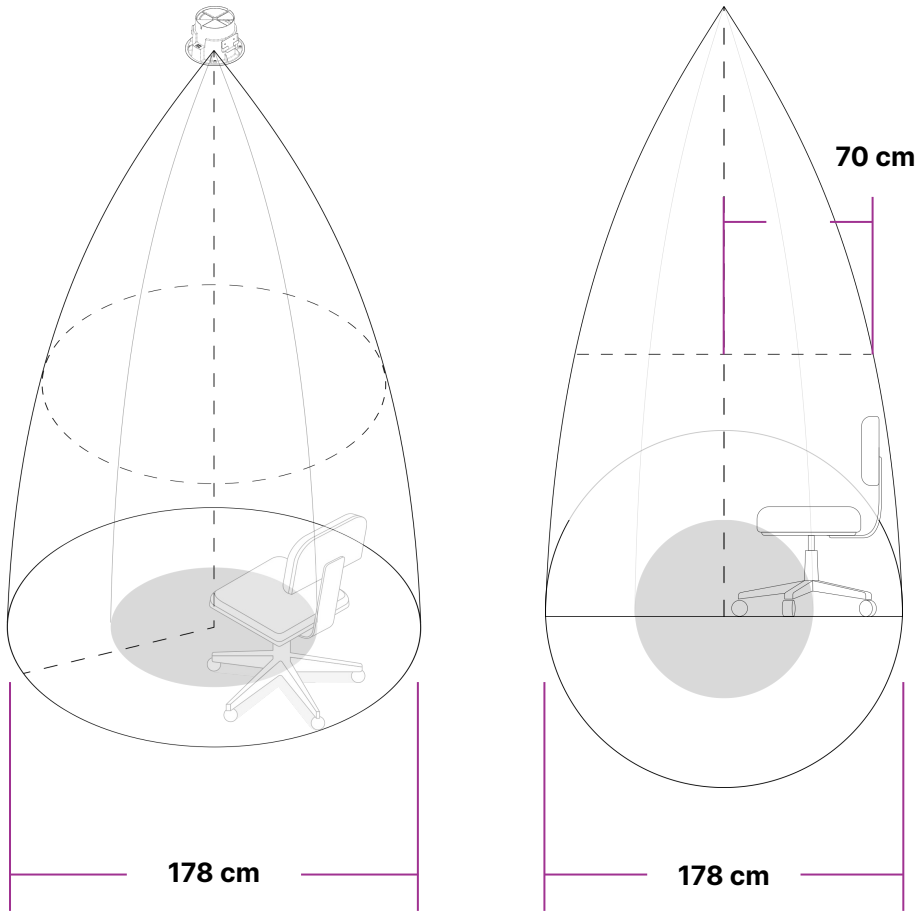
The first step in designing a space for Numa is to identify where each Numa device should be located.

Each Numa should be:

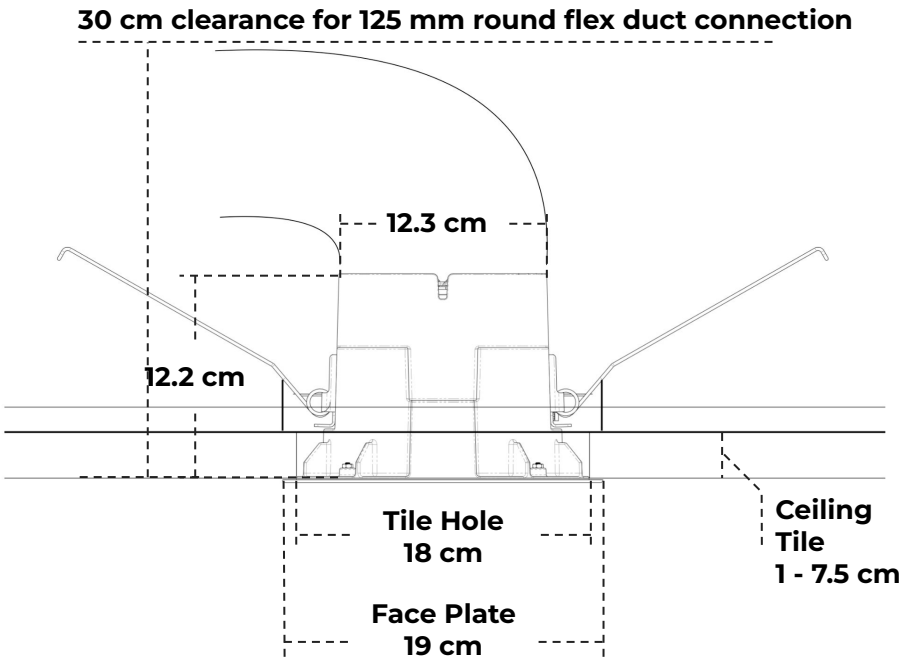
- Minimum 60 cm from other diffusers
- Within 70 cm of expected chair location
- No more than 3.3 m above the floor for seated users.

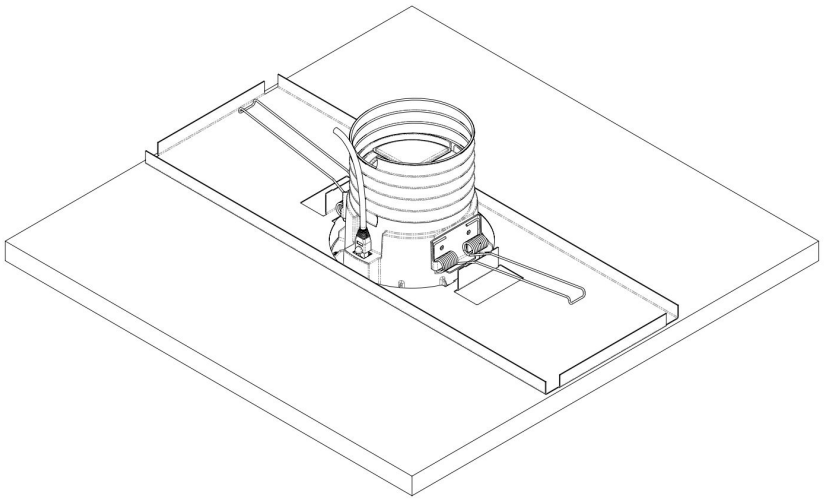
Height of Numa Outlet	Max. Coverage on Floor (∅)
244	173
274	178
305	183
335	183

Numa range at 2.7 m height
∅ = 178 cm

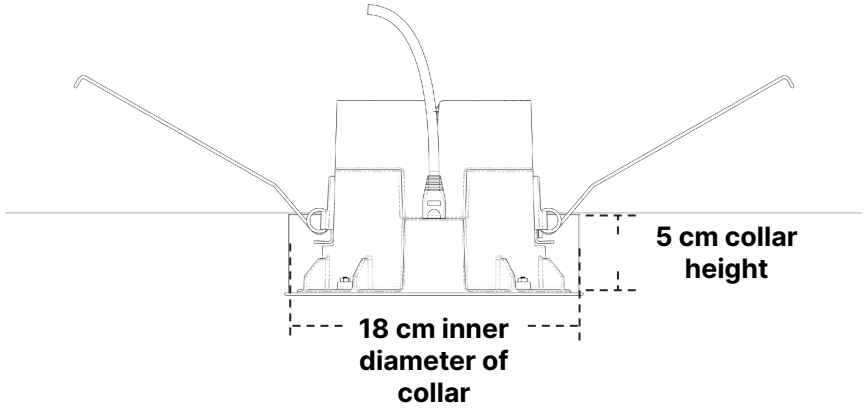


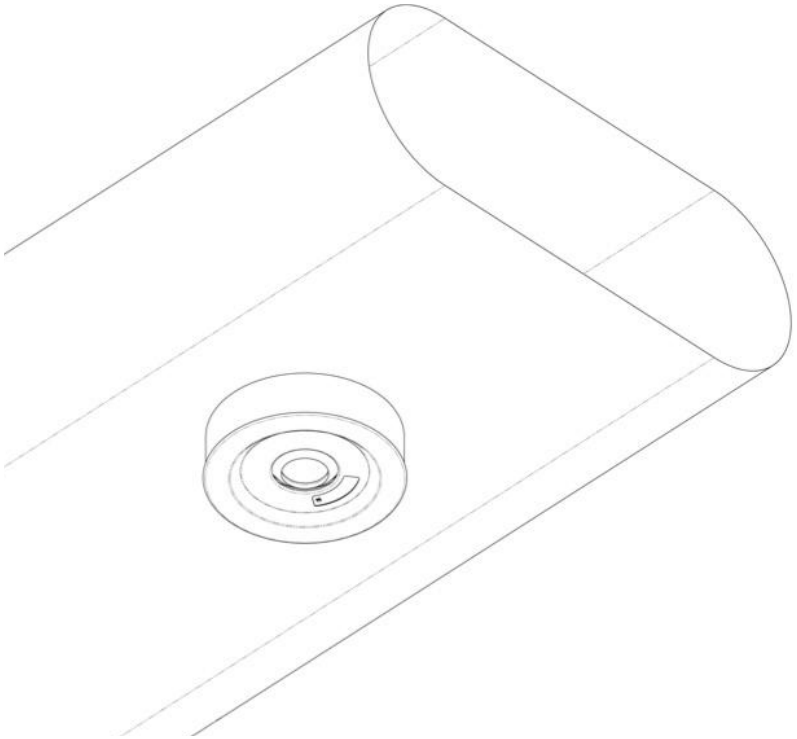
For Grid Ceiling



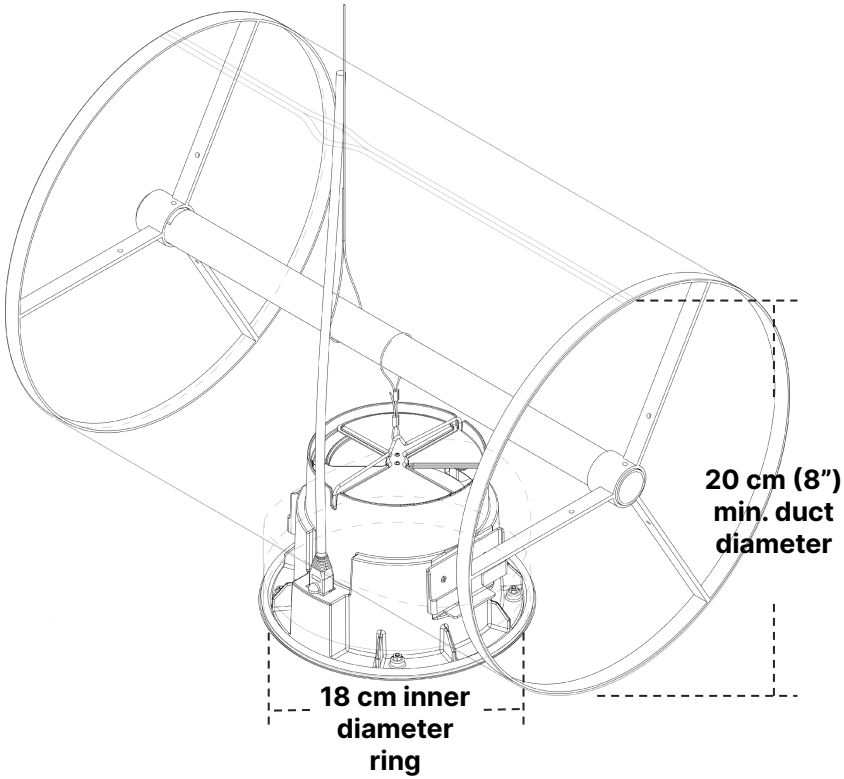


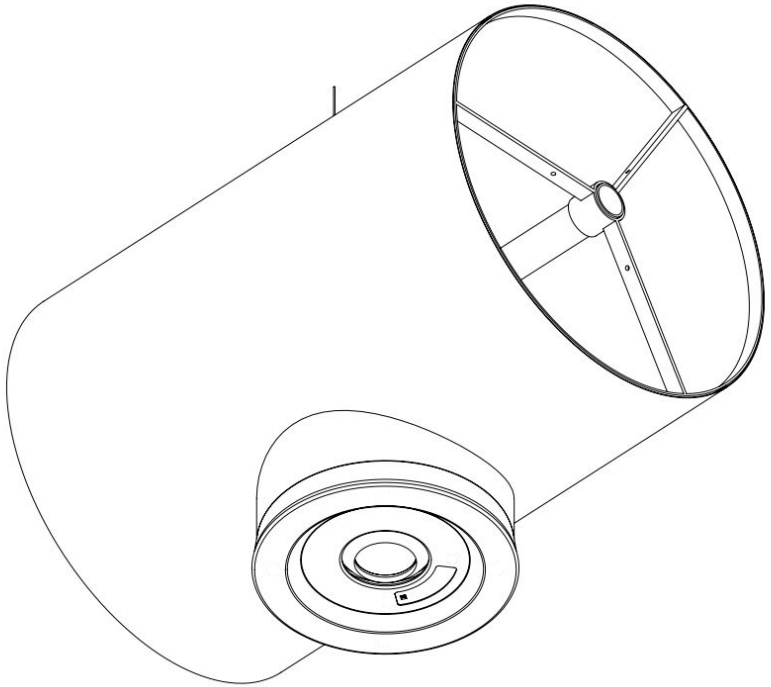
For Exposed Duct





For Fabric Duct





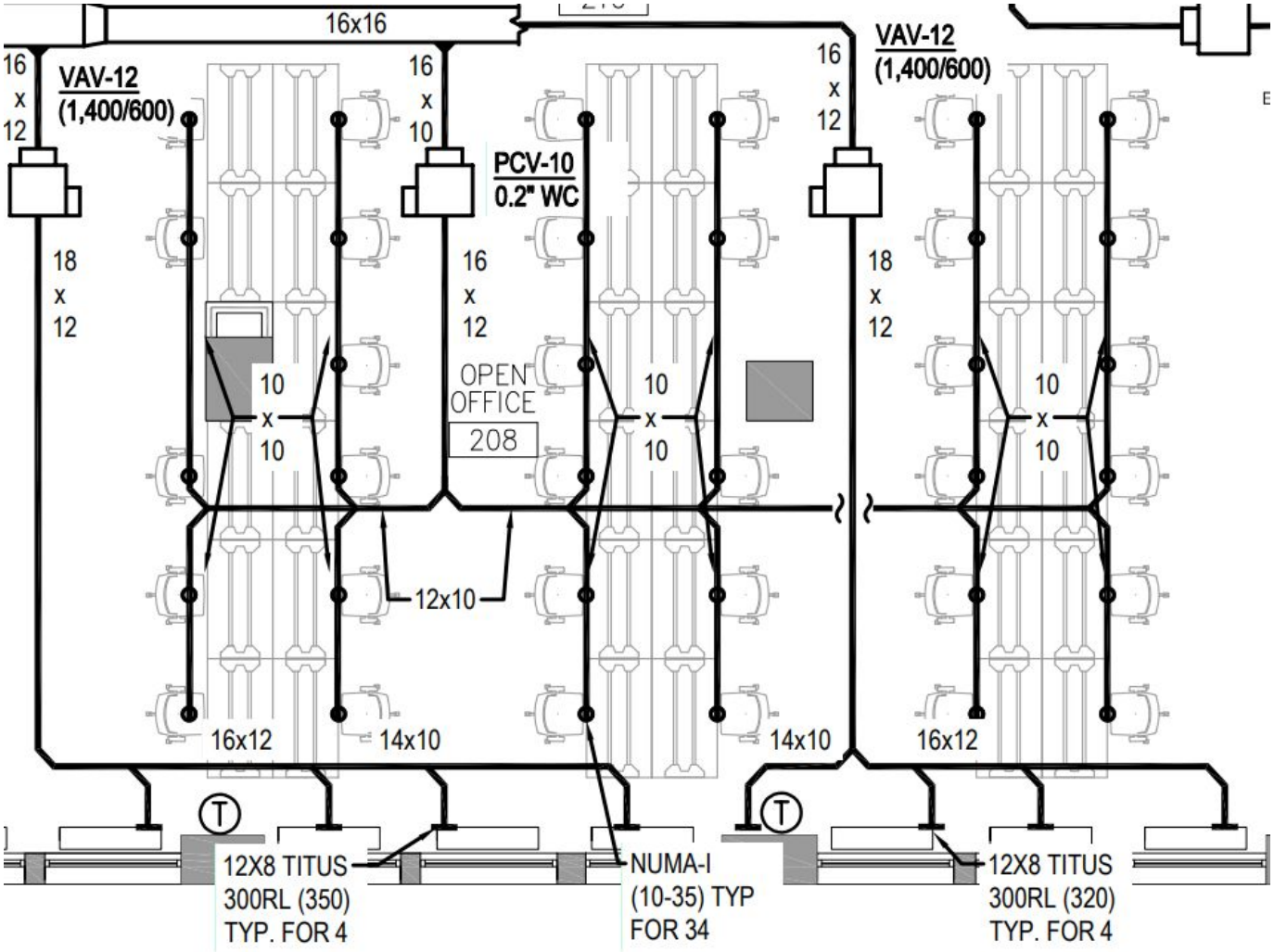
DESIGN CONSIDERATIONS

- Coordinate Power-over-Ethernet provided by IT or BMS contractor. Daisy chaining possible using extenders / splitters also supplied by Numa.
- Discharge air temperature should be at least 12°C.
- Terminal units can serve both Numas and traditional diffusers, modulating to maintain room temperature setpoint, as long as static pressure for Numa remains 25 - 124 Pa.
- AUTO mode is recommended for Numa to maintain background temperature when unoccupied (see Numa-I Datasheet). Numas can be ordered in AUTO or set to AUTO via BACnet IP (BMS) after install.
- Determine maximum and minimum user flow setpoints. Default values are 5 l/s min. and 17 l/s max. Specify alternate maximum and minimum when ordering or set via BACnet IP (BMS) after install.
- Design steps:
    i. Locate each Numa, e.g. over each desk. Consider laying out Numa in a 1.8 m grid for open office.
    ii. Assume ~50% diversity factor from each Numa in design conditions or roughly 12 l/s under default max. and min settings. Size other diffusers to satisfy remaining flow rate required.
    iii. Determine if terminal unit serving Numas will be modulating to maintain space temperature (Numa and traditional diffusers served) or downstream duct static pressure (only Numas served).

SAMPLE DRAWING NOTES

- EACH NUMA-I AIR OUTLET SHALL BE WITHIN 60 CM ON CENTER IN PLAN FROM SEAT BEING SERVED AND ORIENTED WITH DISPLAY CLOSER TO THE SERVED SEAT.
- USE DUCT TAKEOFF WITH VOLUME DAMPER FOR FLEX DUCT CONNECTION OF EACH NUMA-I
- ADJUST BRANCH VOLUME DAMPER TO ENSURE EACH NUMA-I IS PROVIDING AT LEAST 12 L/S AND AT MOST 17 L/S PER AIRFLOW READING FROM NUMA-I REPORTED VIA NUMA AIR APP.

Design Example - Exposed Duct



Design Example - Grid Ceiling