



dyson
AirWall



Air Curtain

An air curtain is a high-velocity stream of air that creates an invisible barrier between two spaces without a physical door.

Prevention, comfort, entertainment

Architecture ends. Discomfort begins.

Outdoor spaces are increasingly used, but rarely comfortable.
Creating an wall of air where nature creates discomfort.



Urban Outdoor Individuals

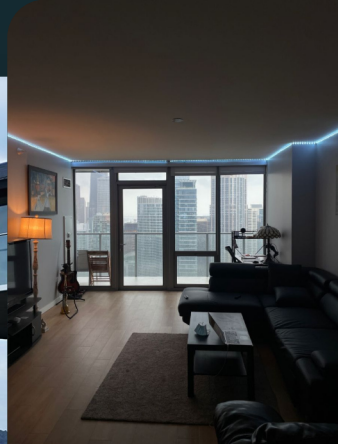
Who they are:

- Live in cities
- Spend time on:
 - balconies
 - terraces
- Use outdoor space daily, not occasionally.

25–45 yrs old



Environment



Apartment houses with doors to balconies.

Key Insights

Material Loop

Smart Energy Use

Modular Design

How Might We?

How might we create a closed-loop system where materials and modules continuously re-enter the product lifecycle?

Core Idea - Material Loop

Instead of treating the air curtain as a sealed product, the system is designed as a material loop — where components can be separated, upgraded, repaired, and recycled at different stages of life.



How Might We?

How might we minimize energy use by adapting airflow dynamically to human behavior and spatial activity?

Core Idea - Material Loop

The air curtain only uses energy when absolutely needed — adapting airflow intensity based on real-world behavior and environmental conditions.



Trend Strategies

Key Insights

Intangible Interaction

Quiet Luxury

Acoustic Harmony

Architectural Fluidity

The "Invisible Premium"

In a "Climate-Impacted World," resilience will be a baseline requirement. The trend is for this resilience to be invisible to the customer. Air curtains will autonomously manage extreme temperature differentials while remaining low-profile into the architecture.



Key Insight

Sensor Tech

Sensor Tech

Higher accuracy & precision

Miniaturisation & integration

Intelligent & autonomous sensing

Specialised sensor systems

Sustainable & energy-aware designs



Why It Matters

Adjusts airflow automatically based on the surroundings.

Uses built-in sensors to check conditions in real time.

Works with a modular system, so sensors can be added or upgraded later.

Makes the experience better by responding more intelligently to users and the environment.



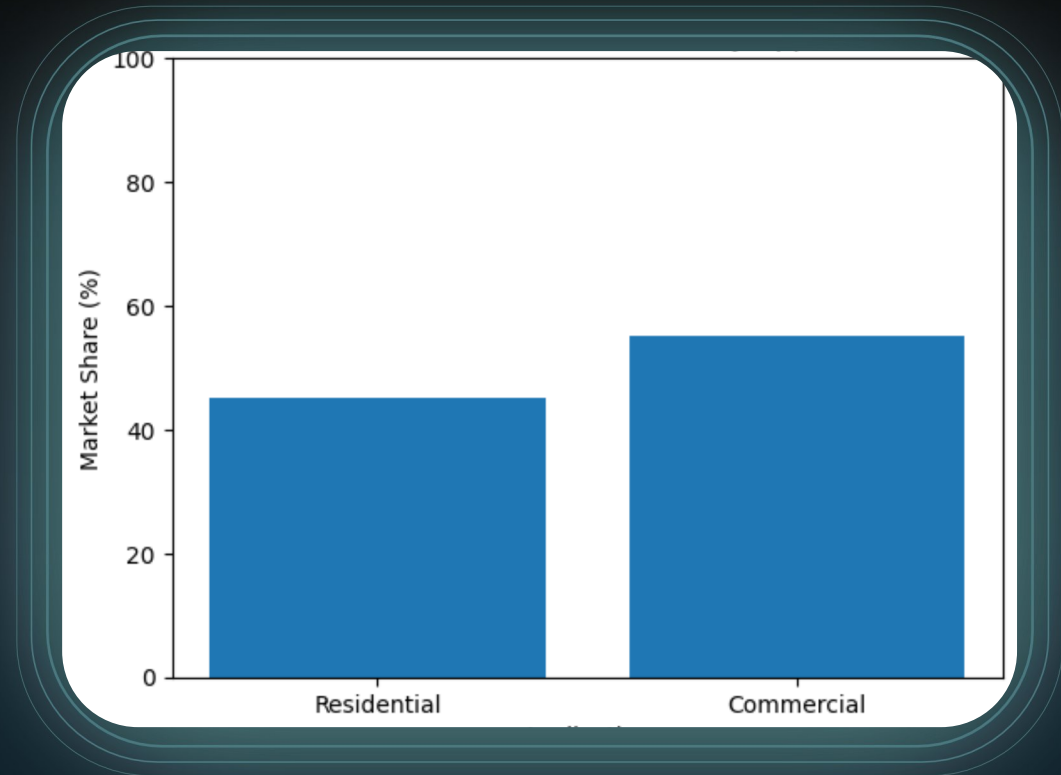
Market

Around \$1.0–1.2 billion globally in 2025–2026.

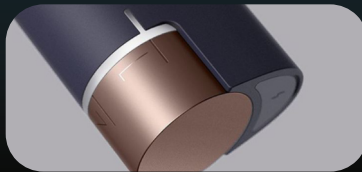
Expected to grow to about \$1.5–2.1 billion by 2033 according to reports.

Residential air curtain market: ~\$450M–\$550M globally.

Market Size

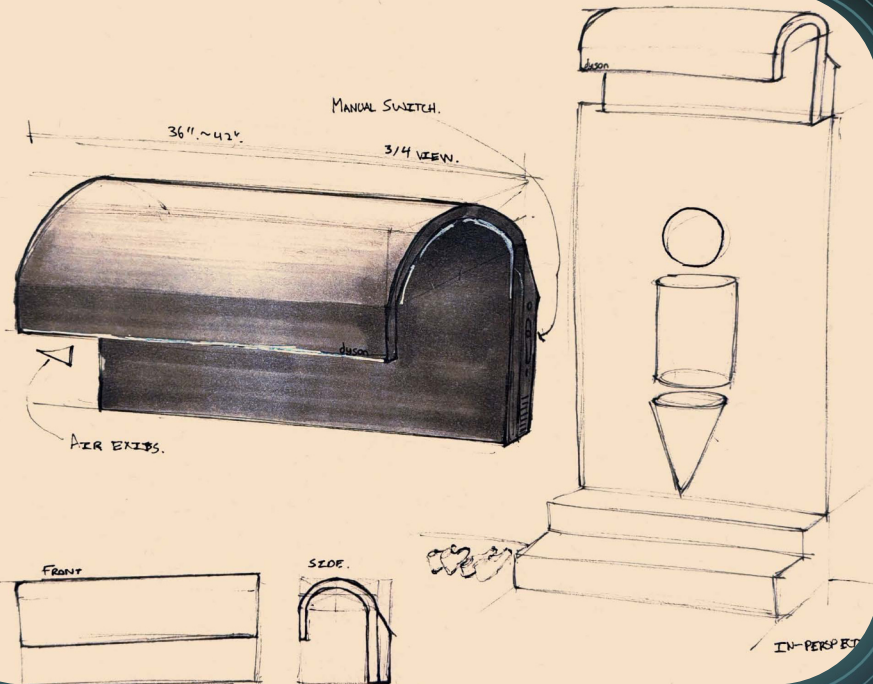


Inspiration Board

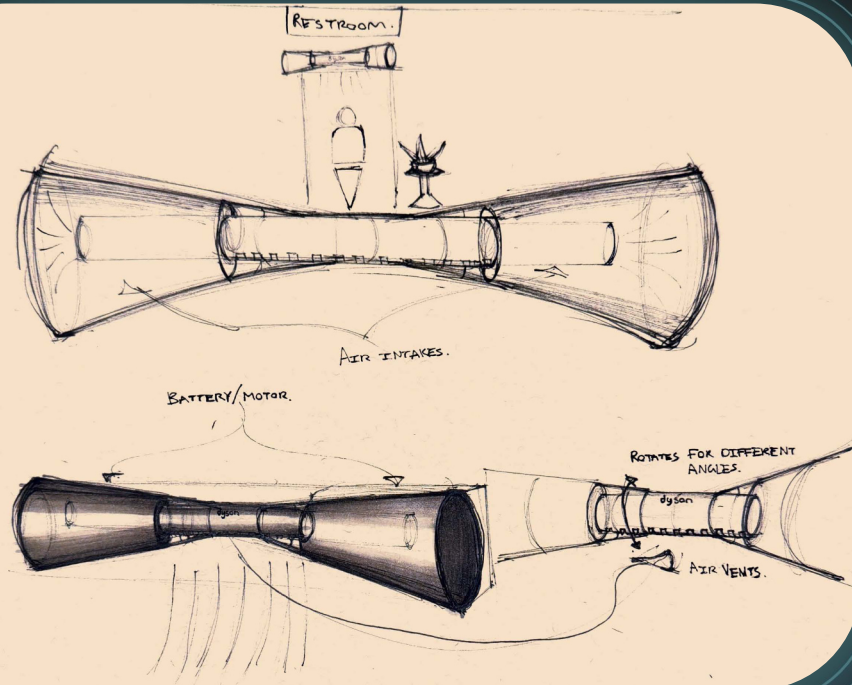


Directions

Direction A



Direction B



Vertical instead of Horizontal

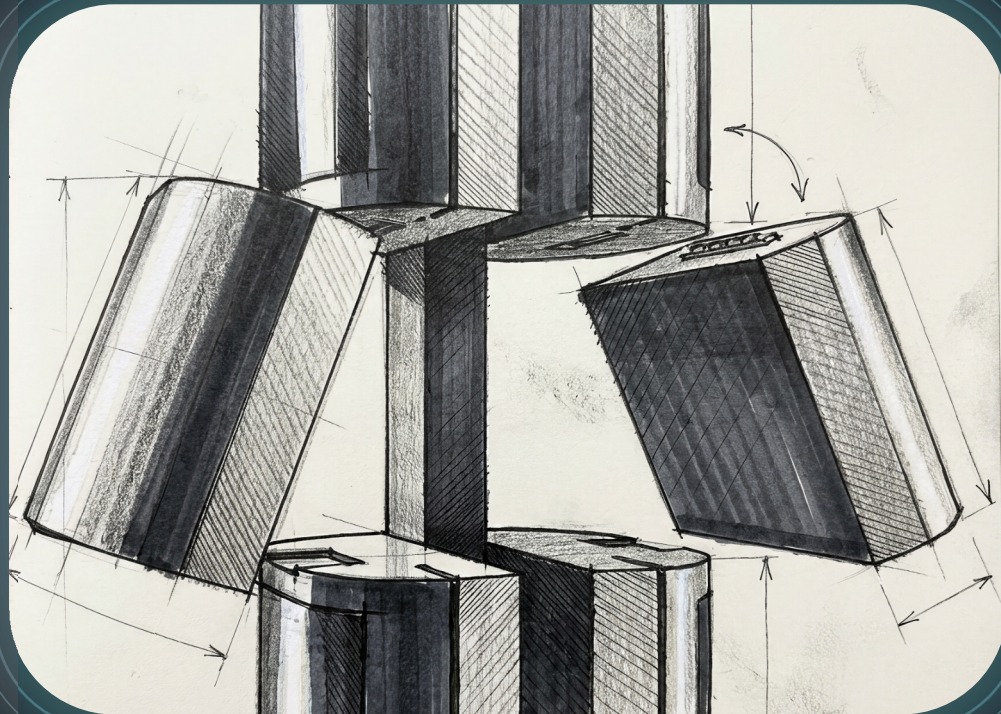
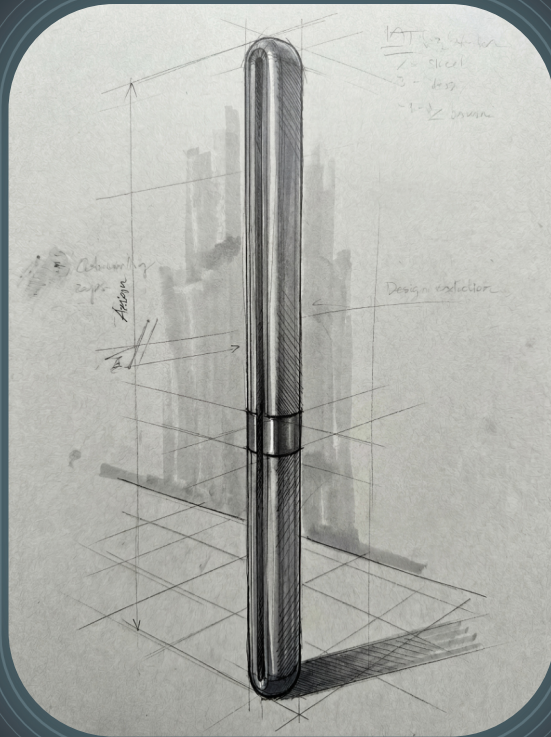
Low Coverage

Upper 1/3 of the door: ~90-98% Coverage

Middle 1/3 of the door: ~75-90% Coverage

Bottom 1/3 of the door: ~50-75% Coverage

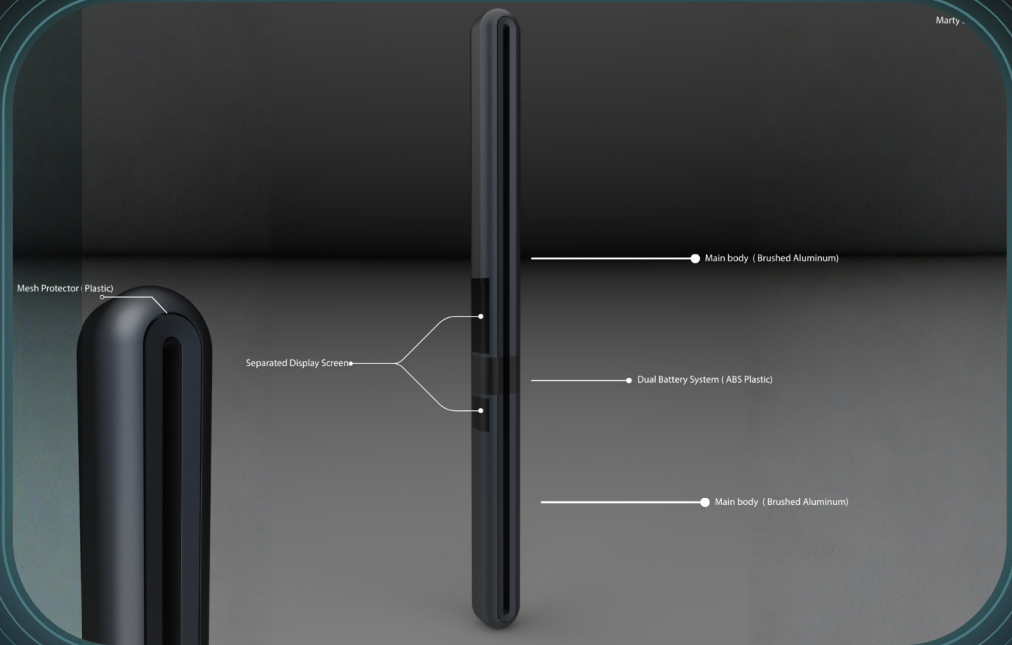
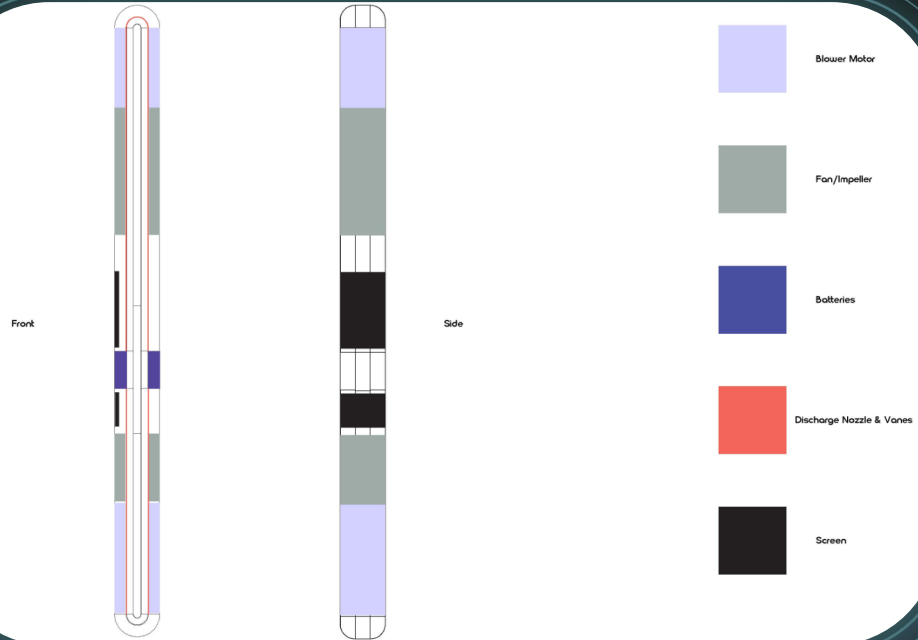




Final Renders



Internal & Callouts





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Thank you

