Steel Architectural Awards ASEAN 2026

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KiN

Thailand

KJL Innovation Campus



KiN KJL Innovation Campus

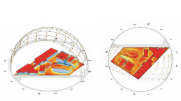
Krathumbean,Samut Sakorn, Thailand

KJL Innovation Campus (KIN) is a mixed-use facility in Samut Sakhon, Thailand, comprising approximately 4,500 square meters across three interconnected buildings. The design integrates various functions to support a collaborative and efficient work environment.

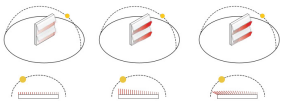
The ground floor of all three buildings houses the factory operations, which are seamlessly connected. A key design feature is an open void that extends to the upper levels, promoting visual interaction between factory workers ("blue-collar") and office staff ("white-collar"). This architectural element also serves a practical purpose, allowing for the natural dissipation of heat generated by the factory equipment.

The second and third floors are designated for communal and administrative use. These levels include a town hall, innovation labs for both metal and electrical work, and the internal offices for KJL staff. This arrangement separates the administrative and R&D functions from the manufacturing floor while maintaining a visual connection.

The building's facade was engineered to respond to the tropical climate, particularly the intense sunlight. The design incorporates a series of fins, strategically calculated based on a solar path analysis. These fins are positioned to block direct sunlight from entering the building during peak hours, significantly reducing solar heat gain. By minimizing the heat load on the interior, the facade design contributes to a more stable and comfortable indoor temperature, which in turn lowers the energy consumption required for air conditioning. This deliberate passive cooling strategy is a cornerstone of the building's sustainable and energy-efficient design.



Sunpath Analysis

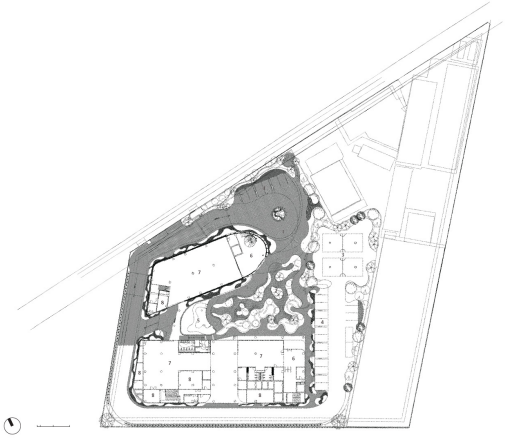


Facade Profile

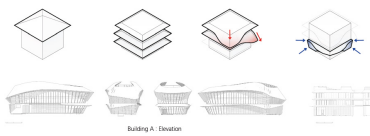


Facade Area

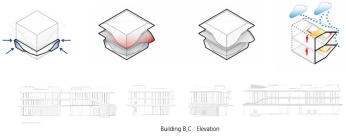
1. DropOff
2. Landscape
3. Takraw Field
4. Parking
5. Cafe
6. Lobby
7. Factory
8. MSE
9. TownHall
10. Lounge
11. Common Area
12. Prototyping Lab
13. Vent
14. Office
15. Storage
16. Meeting Room



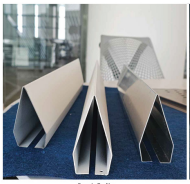
Level 1 Floor Plan



Building A : Elevation



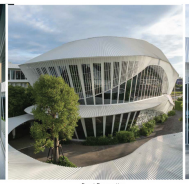
Building B,C : Elevation



Facade Profile



View From Building C

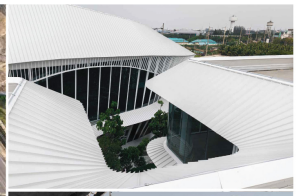


Front Perspective



View From Bridge







Roof Material : LYSAGHT 360 SEAM - Offwhite

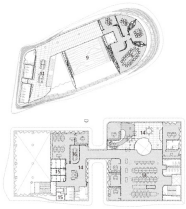
Steel Roof / Steel Structure

Multi-level roof system utilizes continuous, sweeping curves to replace traditional boxy forms with a seamless "loop" geometry that is repeated on every floor to provide consistent architectural shading. While the wide, organic eaves protect the building perimeter from sun and rain, the design strategically incorporates hidden flat slabs in the center of each ring to house mechanical equipment and solar panels, blending high-performance environmental utility with a fluid, minimalist aesthetic.

As for Structural, Building A utilizes built-up steel columns to minimize structural bulk and maximize interior space. The third-floor meeting room is supported by slender, high-strength columns, ensuring a wide-open floor plan while maintaining the necessary load-bearing capacity.



Level 2 Floor Plan



Level 3 Floor Plan

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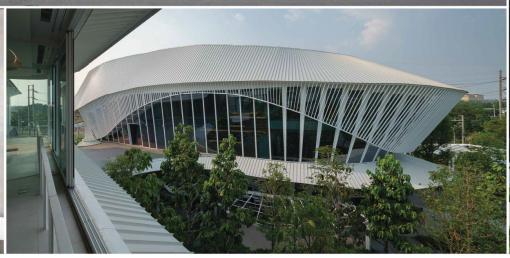
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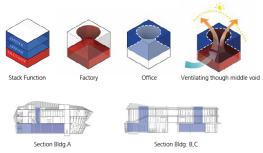




Louver : Factory Area

The Factory features Louver designed with random pattern with voild/solid with void on lower area and solid on upper area, engineered to draw in natural ventilation while managing visibility. This rhythmic arrangement creates a softened visual link between the interior and exterior. By providing workers with filtered views of the surrounding gardens, the design breaks the industrial monotony and fosters a refreshing connection to nature throughout the workday.

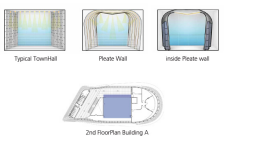




Stack Ventilation : Factory/Office

Vertical thermal vent that utilizes the stack effect to extract heat from the first floor out through the roof, driving continuous circular airflow. This architectural element doubles as a visual void, fostering spatial connectivity and light penetration across levels while maintaining a regulated, high-performance industrial environment.

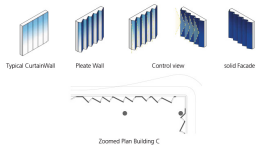




TownHall : Pleated Wall

The townhall features a sophisticated pleated wall, where one side presents a clean, minimalist finish while the reverse showcases a pattern reponse the functionality. These functional pleats serve as integrated shelving and discreet housings for audiovisual equipment and HVAC units, maintaining a clutter-free aesthetic. To maximize versatility, the space combines built-in tiered seating and integrated tables, transforming the hall into an informal collaborative hub for mini-meetups during periods between major events.





B,C facade : Pleated Wall

Pleated wall system engineered to balance panoramic views with effective solar shading. By orienting the Wall of the pleats at specific angles, the design curates the visual experience, framing outward vistas while physically blocking direct solar gain from unfavorable orientations. This rhythmic geometry not only optimizes the internal climate but also ensures a cohesive architectural language that mirrors the aesthetic of Building A, maintaining a unified identity across the campus.

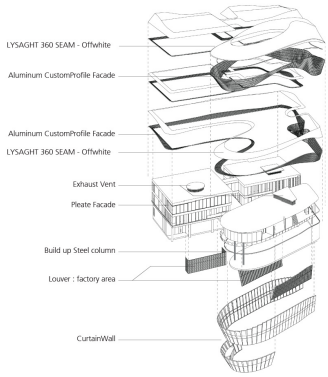






Lobby : Pleated Wall

The lobby reimagines the pleated wall by curving it upward into a sculptural ceiling, creating a striking centerpiece for the entrance. This signature geometry is echoed across the staircase and the lobby's backdrop, creating a seamless visual flow.



Buildings Diagram with Facade system





KJL INNOVATION CAMPUS

Perforated Pattern

Designed as a functional showcase, the campus highlights the owner's expertise in customizable metalwork through integrated architectural features. From a perforated landscape wall that balances airflow with visual connectivity to a light-embedded ceiling that guides visitors, each element demonstrates the material's versatility. This signature language extends to the curved perimeter fencing and bespoke campus gadgets, ensuring that every detail—from ventilation to wayfinding—reflects the building's unique industrial identity.