Automated Parking Facility ECO Cycle

ECO Cycle

GIKEN
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Culture Aboveground, Function Underground

ECO Cycle is an automated bicycle parking facility developed with the concept of “Culture Aboveground, Function Underground”. With a compact entrance booth, it requires minimal space aboveground and provides more than 200 parking spaces underground. ECO Cycle brings a cultural enrichment to the city by promoting the use of the bicycle and preventing disorderly parking.
Features

Safe, Environment-Friendly Design
ECO Cycle blends in with its environment and offers a swift deposit/retrieval of bicycles. Its robust design and construction keeps bicycles dry, safe from theft and protected from the elements. This is a benefit for all users and other stakeholders.

Underground Model
Designed for the concept of “Culture Aboveground, Function Underground”, the underground model enables high accommodation efficiency. With a compact exit/entrance booth, it frees up cultural and public space aboveground.

Shinbashi Station, Tokyo

Aboveground Model
Maintaining similarly high accommodation efficiency as the underground model, the aboveground model can be incorporated into buildings. With the option of installing an exterior glass wall, the aboveground model can be an iconic feature of a building.

Roppongi Station, Tokyo
The speed of operation is a key strength of the ECO Cycle, with the fastest retrieval at 8 seconds (average of 13 seconds), reducing wait times and congestion.

### Simple Operation

Push-button to deposit and swipe IC card to retrieve. Easy and simple operation made accessible to all users.

### Deposit

The ECO Cycle automatically recognizes the tag attached to bicycles. Users can deposit with a single push-button.

1. Set bicycle on guide rail
2. Push-button
3. Automated deposit of bicycle
4. Storage completed

### Retrieval

Simply by swiping an IC card, user can retrieve bicycle within an average of 13 seconds.

1. Swipe card
2. Step back from mat
3. Bicycle is automatically rolled out
4. Retrieve bicycle

### Supports Many Bicycle Types

ECO Cycle can accommodate various type of bicycles, from commuting bicycles to mountain bicycles and electric bicycles.

Example of bicycles that can be parked *Japanese Specification*

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Tire Size</td>
<td>18-28&quot;</td>
</tr>
<tr>
<td>B Tire Width</td>
<td>Max. 55mm</td>
</tr>
<tr>
<td>C Total Width</td>
<td>Max. 650mm</td>
</tr>
<tr>
<td>D Total Length</td>
<td>Min. 1400mm, Max. 1950mm</td>
</tr>
<tr>
<td>E Total Height</td>
<td>Max. 1350mm</td>
</tr>
<tr>
<td>F Front Basket Width</td>
<td>Max. 500mm</td>
</tr>
<tr>
<td>G Front Basket Height From Ground</td>
<td>Max. 550mm</td>
</tr>
<tr>
<td>H Rear Basket Width</td>
<td>Max. 500mm</td>
</tr>
<tr>
<td>I Weight</td>
<td>Max. 40kg</td>
</tr>
</tbody>
</table>

- Commuting Bicycles with baskets
- Electric Bicycles
- Bicycles with child seats (front and rear)
- Small wheel Bicycles / Foldable Bicycles
- Road Bicycles
- Mountain Bicycles
**Safety**

**High Design Safety**

Considering the safety of both users and bicycles, ECO Cycle is equipped with various safety features.

- **Entering / Exiting door**
  - The entering / exiting door only opens when bicycles pass through. This prevents users from entering the ECO Cycle.

- **Side guard**
  - The guard prevents entry by children and ensures safety.

- **Shutter**
  - Using Giken technology, the shutter will only accommodate up to the width of tires. Any oversized item will be rejected.

- **Guide rail**
  - Sensor will automatically detect any misaligned bicycles and bicycles that have been wheel-locked. A warning announcement will be made to alert users.

- **Pressure Sensor Mat**
  - Pressure Sensor Mat is designed to stop operation when a person is standing on the mat. If someone stands on the mat when a bicycle is passing through the door, the operation will be halted and the bicycle will be returned to its original position.

- **Earthquake detection sensor**
  - The operation will automatically stop if an earthquake with an intensity above a nominated level is detected.

**Ecology**

**Design • Construction Concept**

Giken's original construction method [Press-in method] minimises construction period, space, noise and vibration. The framework is also designed for easy removal after use.

- **Rapid Construction**
  - The simple construction process enabled by the Press-in Method allows for completion of one unit in as short as two months.

- **Space-saving Construction**
  - Integrated, compact machinery allows for construction in tight quarters, limiting impact on the surrounding environment and transportation networks and maximizing cost-efficiency.

- **Noise and vibration free construction**
  - Construction using Giken's Silent Piler will minimise noise and vibration compared to conventional methods. This will allow construction to be done without disturbing the environment.

**Functional Structure - Easy to relocate / reuse**

- **Relocation/Reuse**
  - The ECO Cycle is designed to be a "functional structure". Taking into consideration the fact that bicycle parks may become unnecessary, it allows simple deconstruction and removal, leaving the environment in its original state. The materials removed can also be reused, contributing greatly to a sustainable society.
Support
Reliable Customer Support

Our Support System
In case of any malfunction within Japan, the emergency alarm will notify our support centre and operations can be restored remotely. Technical personnel will be dispatched promptly in case remote restoration is not possible.

24/7/365 Support
Toll-Free Call
Remote Operation (Guidance)
Emergency Alarm
Monitoring
Visual Confirmation
Security Camera

Support Center
Dispatch Request

Local Dispatch

Real-time Monitoring
Cameras installed in the ECO Cycle provide 24/7 monitoring capabilities; staff can respond promptly and accurately.

Visit Us
Observation

GIKEN ECO Plaza
Visit us to see and learn more about Eco Cycle

Address: Daicho Shinagawa Building 1F, 1-6-35 Kan, Minato-ku, Tokyo
7-minute walk from JR Shinagawa Station Kenar Exit (East Exit)

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Specifications

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Elevator Parking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>200 Bicycles (Stored)</td>
</tr>
<tr>
<td>Operation Method</td>
<td>Card Reader X 5 (Up &amp; Top)</td>
</tr>
<tr>
<td>Retrival Time</td>
<td>12 Sec. (Average)</td>
</tr>
<tr>
<td>Usage Type</td>
<td>Monthly / Standby (Partial Cycle, removed via Front)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bike Specification</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tire Size</td>
<td>14-28&quot;</td>
</tr>
<tr>
<td>Tire Width</td>
<td>Max. 55mm</td>
</tr>
<tr>
<td>Total Width</td>
<td>Max. 510mm</td>
</tr>
<tr>
<td>Total Length</td>
<td>Min. 1400mm, Max. 1900mm</td>
</tr>
<tr>
<td>Total Height</td>
<td>Max. 3990mm</td>
</tr>
<tr>
<td>Front Basket Width</td>
<td>Max. 150mm</td>
</tr>
<tr>
<td>Front Basket Height</td>
<td>Max. 510mm</td>
</tr>
<tr>
<td>Rear Basket Width</td>
<td>Max. 150mm</td>
</tr>
<tr>
<td>Weight</td>
<td>Max. 48kg</td>
</tr>
</tbody>
</table>

*Time from swiping card to exit door opening

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