**Horizontal Box Parking System**

The **Horizontal Box Parking System** is a smart and efficient solution that combines the vertical movement of an elevator with the horizontal movement of conveyors to maximize parking capacity in compact spaces. Vehicles are placed on pallets arranged in rows, which are moved in and out of the building through a fully automated control system. This system is particularly suitable for **small to medium-sized buildings**, offering a parking capacity of **20 to 40 cars** within a limited footprint.

Its modular and expandable design also allows for **multi-level configurations**, making it adaptable to diverse site conditions. With quick parking and retrieval cycles, low noise operation, and a robust electromechanical drive system, the Horizontal Box Parking System ensures convenience, safety, and efficiency. Its versatility makes it an excellent choice for **residential complexes, office buildings, hotels, and small commercial properties** where land use must be optimized without heavy construction requirements.

By offering a balance between technology and practicality, this system provides a **cost-effective and reliable alternative** to conventional basements or multi-story parking structures.

**General Specifications**

* **Capacity Range:** 20 – 40 cars (expandable with multi-level design)
* **Operation Principle:** Combination of vertical lift + horizontal conveyor pallet system
* **System Length & Width:** Customizable based on number of rows and car dimensions
* **Height Requirement for 4 Levels:**
  + **Height from Ground to Bottom of First Level:** 0 mm (ground-based installation)
  + **Inner Available Height (for 4 level):** 8800 mm – 10500 mm (depending on vehicle type)
  + **Total Building Height (for 4 levels):** 8200 mm – 9600 mm (approx.)
* **Car Length Capacity:** Up to 5000 mm
* **Car Width Capacity:** Up to 1900 mm – 2100 mm
* **Car Height Capacity:** Up to 1800 mm – 2000 mm (customizable slot height)
* **Car Weight Capacity:** Up to 2000 – 2500 kg per vehicle
* **Drive Mechanism:** Electromechanical conveyor + elevator lift
* **Power Requirement:** 15 kW – 25 kW (depending on capacity & levels)
* **Structure:** Heavy-duty modular steel frame with powder-coated, anti-corrosion finish
* **Safety Features:**
  + PLC-based automated control system
  + Obstruction detection sensors
  + Anti-fall locks for lifts
  + Overload protection
  + Emergency stop and backup power options

**Key Benefits of Horizontal Box Parking System**

* **Space Optimization:** Reduces land usage by up to **50% compared to conventional parking** methods.
* **High Capacity:** Extendable up to **25 parking levels**, adaptable to residential, commercial, and mixed-use projects.
* **Compact Footprint:** Can be installed in the space equivalent to just **3 standard car slots**.
* **Flexible Construction:** Customizable in both **steel and RCC structures**, depending on site requirements.
* **Scalable Applications:** Ideal for **residential complexes, hotels, hospitals, malls, cinema halls, and office buildings**.
* **Faster Implementation:** Significantly reduces construction and installation time compared to traditional basements or multistorey parking.
* **Customizable Dimensions:** Available with **variable car sizes, level heights, and extended weight capacities** to suit sedans, SUVs, and luxury vehicles.
* **Vehicle Turntable (Optional):** Provides easy entry/exit orientation without the need for manual reversing.
* **Efficient Vehicle Handling:** Equipped with **elevators for vertical transport** and conveyor systems for horizontal transfer to storage areas.
* **High Reliability:** Offers **quick parking and retrieval cycles** with up to **99% system uptime**.
* **Smart Operation:** Fully automated access via **RFID tags, smart cards, or touchscreen panels** for a seamless user experience.