



BUHLE POWER

High-efficiency folding containers for drone stations





Overview

Are dedicated drone charging stations a cost-effective solution?

We propose establishing dedicated drone charging stations and optimizing drone routing for efficient deliveries to address these issues. We present a MINLP (Mixed Integer Non-Linear Programming) model aimed at identifying the most cost-effective solution that optimizes both transportation efficiency and charging infrastructure investment.

Are drone charging stations a viable alternative to traditional delivery methods?

Sudbury and Hutchinson (2016) assert that drone technology, replacing labor and traditional delivery methods, holds promise but faces challenges. Limited battery life restricts drone delivery range; however, drone charging stations offer a solution by enabling longer flights and wider delivery areas.

How does a wireless drone docking station work?

Fig. 3: Electrical scheme of the proposed wireless drone docking station, which consists of an ETU and an ERU. The system includes three wireless charging modules connected in parallel at the transmitter side. On the receiver side, the wireless charging modules can be connected in series or parallel.

How to extend drone power autonomy?

One of the most promising solutions to extend drone power autonomy is the use of docking stations to support both landing and recharging of the drone. To this end, we introduce a novel wireless drone docking station with three commercial wireless charging modules.



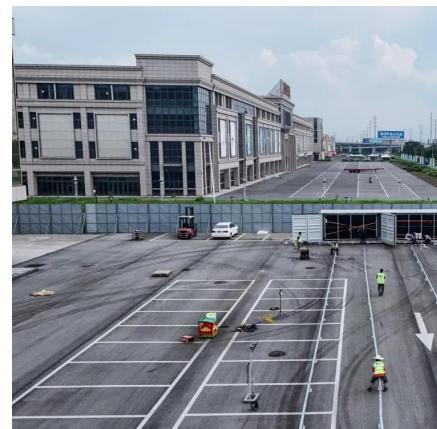
High-efficiency folding containers for drone stations



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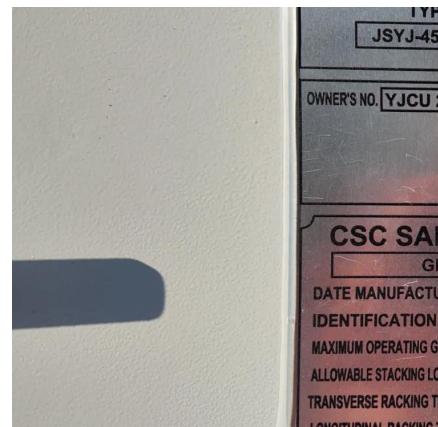
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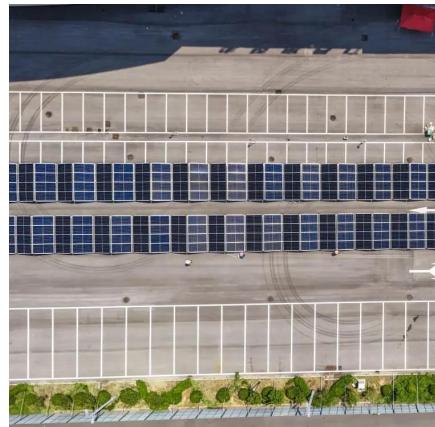
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