



electronicsforu.com
If it's electronics, it's here

Canebot: A Robotic Vending Machine Serving Fresh Sugarcane Juice

By Nitisha Dubey

December 1, 2024

Pune's Canectar Foods Private Limited has introduced Canebot, a robotic vending machine designed to dispense fresh sugarcane juice.

Founded in 2018 by Milind Datar and Kirty Datar, Pune-based Canectar Foods Private Limited has developed Canebot—a robotic vending machine that prepares and serves fresh sugarcane juice. This patented innovation merges robotics, IoT, and Industry 4.0 to deliver a seamless, automated customer experience. As Milind explains, the name 'Canebot' blends 'cane' from sugarcane and 'bot' from robot.

Milind and Kirty Datar, Co-Founders, CaneBOT

The Canebot machine is fully operated and managed through software and electronics, seamlessly integrating hardware, software, and IoT (Internet of Things).

Canebot is accessed via a touchscreen interface. Customers interact with it similarly to an ATM: they select their options and make payments using UPI—only digital payments are accepted, with no cash—and the machine activates once the payment is confirmed. The machine features internal storage akin to an ATM's cash compartment, where an operator loads fresh sugarcane sticks into the refrigerated machine daily, ensuring the cane remains fresh and chilled. Juice is extracted only when ordered, guaranteeing that it is freshly made and naturally chilled due to the pre-cooled sugarcane.

“Canebot represents our commitment to utilising advanced technology while maintaining the quality and authenticity of fresh sugarcane juice. The machine is compact, occupying just 12 square feet, and can be scaled rapidly, enabling micro-entrepreneurs to easily set up and operate these machines. The most important aspect of our innovation is that sugarcane juice can make consumers healthy and farmers prosperous,” says Kirty.

They claim to have designed and developed all aspects of their innovative products in-house. However, they have partnered with an OEM because they recognise that this is a highly complex machine requiring precision engineering equipment. “While our OEM partner handles the manufacturing, we own the entire concept and intellectual property. This is a contract manufacturing arrangement, where these

machines are exclusively produced for us,” emphasises Milind. They have a team of 17 people.

“The system comprises two major components. The first involves purchased parts, such as the gearbox, motor, and actuators, which are sourced directly from the market rather than manufactured in-house. While some elements, particularly the actuators, are procured externally, most of these components are sourced from within India. Around 85-90% of our components are manufactured/sourced locally, with only certain specialised electronic parts imported,” says Kirty. This combination of local manufacturing and advanced engineering makes Canebot a true ‘Made in India’ product.

Milind shares that they have secured seven patents for different mechanisms of Canebot, thereby creating a strong entry barrier. The startup is implementing a franchise model to build a brand around its technology. “This approach allows us to maintain control over the quality of sugarcane used, as the hygiene of the juice is heavily dependent on the raw material. Through this model, we provide machines to micro-entrepreneurs and manage the supply chain by partnering with authorised suppliers to ensure high-quality inputs,” adds Kirty.

She also notes that their compact machines, which require only 1.11 square metre (12 square feet) of space, can be rapidly scaled and

installed in airports and malls. This will help create thousands of micro-entrepreneurs while providing them with technical support, training, and raw materials.

The business model involves both one-time and recurring revenue streams. The one-time revenue is generated from the sale of franchises and the associated machines to the franchisees. In addition, there is recurring revenue in terms of royalty and platform charges. The franchisees can manage these machines without visiting the physical location. The machines are fully IoT-enabled and connected to the cloud, allowing franchisees to track sales and manage inventory remotely. This machine can produce between 700 and 900 glasses per day. Additionally, they generate income by selling bagasse, the sugarcane waste left after juice extraction.

Having recently launched their machines commercially in Pune, the company aims to achieve revenue of 400 million by 2027, concludes Milind.