



# Japanese-Made Vending Machines Lead the World



# **JAPANESE VENDING MACHINES**

**HISTORY OF VENDING**

**KEY FEATURE OF JAPANESE VENDING MACHINE**

**TYPE OF VENDING MACHINE**

# What is a Vending Machine?

- A vending machine is an automated retail system that dispenses products such as beverages, snacks, frozen food, or daily necessities without the need for on-site staff. Customers select items through a display or buttons and complete payment using cashless systems or cash, receiving products instantly.
- A vending machine is more than just an automated sales unit — it is a **24/7 retail business** that operates with low labor costs, high efficiency, and consistent revenue. By offering instant access to products anytime and anywhere, vending machines transform unused spaces into profitable sales points.
- From offices and factories to airports, shopping malls, and public facilities, vending machines deliver convenience, speed, and scalability for modern businesses.



# The History and Technical Evolution of Vending Machines

## 1. Origins of Automated Dispensing

The concept of vending machines dates back to the **1st century AD**. The earliest known automated dispensing device was created by **Hero of Alexandria**, a Greek engineer. His mechanism dispensed a fixed amount of holy water when a coin was inserted, using gravity, levers, and counterweights. This invention established the fundamental principle of **coin-actuated control**, which remains central to vending technology today.

## 2. Early Mechanical Vending Systems (17th–19th Century)

Modern vending machines began to emerge in 17th-century England, where coin-operated devices were used to sell tobacco in inns. These machines were entirely mechanical, relying on springs, levers, and gears. In 1883, the first commercially successful vending machine was introduced by Percival Everitt in London. It dispensed postcards and envelopes and was installed in railway stations. This marked a shift toward public, unattended retail and demonstrated the commercial viability of vending systems.



Holy water vending machine created by Hero

# The History and Technical Evolution of Vending Machines

## 3. Expansion and Electrification (Early–Mid 20th Century)

The early 20th century saw vending machines expand into new product categories, including beverages, candy, and cigarettes.

During this period, machines transitioned from purely mechanical designs to electromechanical systems.

## 4. Refrigeration, Heating, and Product Control (Mid–Late 20th Century)

A major technical milestone was the integration of temperature control systems.

Refrigerated vending machines became widespread in the 1950s, enabling the sale of chilled beverages and perishable items. Japan later pioneered the integration of heating functions, allowing vending machines to dispense hot drinks safely and consistently. This required advanced insulation, precise thermostatic control, and enhanced safety standards.



Vending machine made by Fuji Electric in 1970

# The History and Technical Evolution of Vending Machines

## 5. Digital Control and Cashless Payments (Late 20th–Early 21st Century)

The introduction of microprocessors revolutionized vending machine design. Mechanical timers and relays were replaced by programmable control boards, enabling: Accurate inventory tracking, fault detection and error logging, dynamic pricing and product management. Payment systems evolved from coins and bills to magnetic cards, IC cards, NFC, and QR-based mobile payments, greatly expanding usability and transaction speed.

## 6. Networked and Smart Vending Machines (Now and Future)

Modern vending machines are now part of the Internet of Things (IoT) ecosystem. Through network connectivity, operators can remotely monitor machine status, sales data, temperature, and power consumption. Key features of smart vending include: remote diagnostics and predictive maintenance, real-time sales and inventory analytics, energy optimization and demand-based operation, multilingual user interfaces and digital advertising. These advancements reduce operational costs while improving machine uptime and customer experience.

# Why Japanese-Made Vending Machines?

Japan is recognized globally as the **leader in vending machine technology and reliability**. Japanese vending machines are designed to operate continuously in demanding environments while maintaining high performance, safety, and user satisfaction.

## 1. Exceptional Reliability

Japanese manufacturers are known for precision engineering and strict quality control. Machines are built for long service life, stable operation, and minimal downtime. Japanese vending machines are built for continuous operation. Their durability minimizes downtime, reduces maintenance costs, and ensures stable daily sales — even in high-traffic or harsh environments.

## 2. Energy-Efficient, Future-Ready Design

Eco-friendly systems reduce power consumption while meeting global sustainability standards — lowering operating costs and supporting ESG goals. 1 year electric consumption=1,761 kWh



30 years old Japanese vending machine still in operation

# Why Japanese-Made Vending Machines?

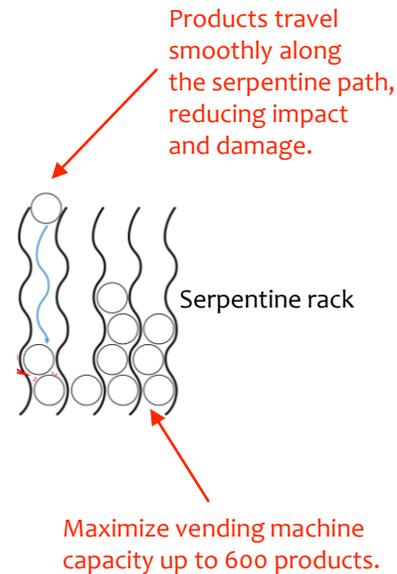
## 3. Serpentine Rack: Smart Product Delivery That Sells More

The serpentine rack is one of the most trusted and widely used product delivery systems in Japanese vending machines. Designed for reliability and flexibility, this mechanism ensures smooth, controlled product dispensing while protecting both the product and the customer experience. Unlike drop-type systems, the serpentine rack gently guides products through a spiral-style path, delivering them safely and consistently — even for fragile or premium items.

Serpentine racks can handle a wide variety of product sizes and shapes, allowing operators to change product lineups easily based on market demand.

Products travel smoothly along the serpentine path, reducing impact and damage.

Simple rack structure enables quick loading and adjustment, reducing labor time and improving operational efficiency.



# Why Japanese-Made Vending Machines?

## 4. Dual Cooling & Heating Technology: Sell More, All Year Round

One of the greatest advantages of Japanese vending machines is their advanced cooling and heating functionality — allowing a single machine to dispense both cold and hot products reliably. This dual-temperature capability transforms a vending machine into a year-round profit generator, adapting instantly to weather, season, and consumer demand.

Japanese vending machines are designed around real consumer behavior. By offering hot drinks in winter and cold beverages in summer, operators maximize usage and customer satisfaction — regardless of the season.

## 5. More Product Selections. More Reasons to Buy.

One of the strongest competitive advantages of Japanese vending machines is their ability to offer a large number of product selections in a single unit. With advanced rack systems and intelligent control design, one machine can display and sell dozens of items — turning limited space into a high-performance retail store. More choices mean more customers, more purchases, and higher overall revenue.

# PET CAN Vending Machine



- Type: PET Bottle & Canned Drink Vending Machine
- Brand: FUJI Electric
- Cooling & Heating: HOT and COLD PET bottle drinks and canned drinks
- Dimension: 1,027mm(W), 731mm(D),1,830mm(H)
- Weight: 227 Kg
- Selection: 30 and 36 selection
- Lamp: LED
- Refrigerant : R1234YF
- Machine Capacity: 595 drinks
- Products: PET Bottle drinks, canned drinks and small glass bottle
- Machine Placement: Indoor and Outdoor

# Combo Vending Machine



- Type: Combo Vending Machine
- Brand: FUJI Electric
- Cooling: COLD PET bottle drinks, canned drinks and snacks
- Dimension: 1,161mm(W), 852mm(D),1,830mm(H)
- Weight: 298 Kg
- Selection: 60 selection
- Lamp: LED
- Refrigerant : R1234YF
- Product dispensing type: Spiral rack & Conveyor belt
- Products: COLD PET bottle drinks, COLD canned drinks, snacks, cup noodles, potatoes chips & peanuts, breads, candies, chocolate bar and etc.
- Machine Placement: Indoor

# Cup Vending Machine



- Type: HOT and COLD CUP Vending Machine
- Brand : FUJI Electric
- Cooling & Heating: HOT and COLD coffee bean drinks, powder and carbonated syrup drinks
- Dimension: 990mm(W), 780mm(D),1,830mm(H)
- Weight: 230 Kg
- Selection: 56 selection
- Lamp: LED
- Refrigerant : R1234YF
- Products: HOT & COLD coffee bean drinks, instant coffee, powder based drinks like chocolate drink, Japanese tea or matcha, carbonated syrup drinks.
- Machine Placement: Indoor

# Tetra Pack Vending Machine



- Type: Tetra Pack Vending Machine
- Brand: FUJI Electric
- Cooling & Heating: HOT and COLD tetra pak drinks and small size glass bottle drinks
- Dimension: 690mm(W), 796mm(D), 1,830mm(H)
- Weight: 270 Kg
- Selection: 18 selection
- Lamp: LED
- Refrigerant : R1234YF
- Product dispensing type: Pivoting release mechanism
- Products: HOT and COLD Tetra Pak/Flat carton drinks
- Machine Placement: Indoor and Outdoor

# Frozen Vending Machine



- Type: Frozen Vending Machine
- Brand: FUJI Electric
- Cooling: Frozen foods, ice cream and frozen fruit
- Dimension: 1,161mm(W), 886mm(D),1,830mm(H)
- Weight: 330 Kg
- Selection: 10 selection
- Lamp: LED
- Refrigerant : R404A
- Cooling temperature: Frozen (-23°C ~ -19 °C)
- Product storage: Spiral rack type
- Products: RTE frozen foods, frozen meat, frozen fish, frozen fruit and ice cream
- Machine Placement: Indoor and Outdoor