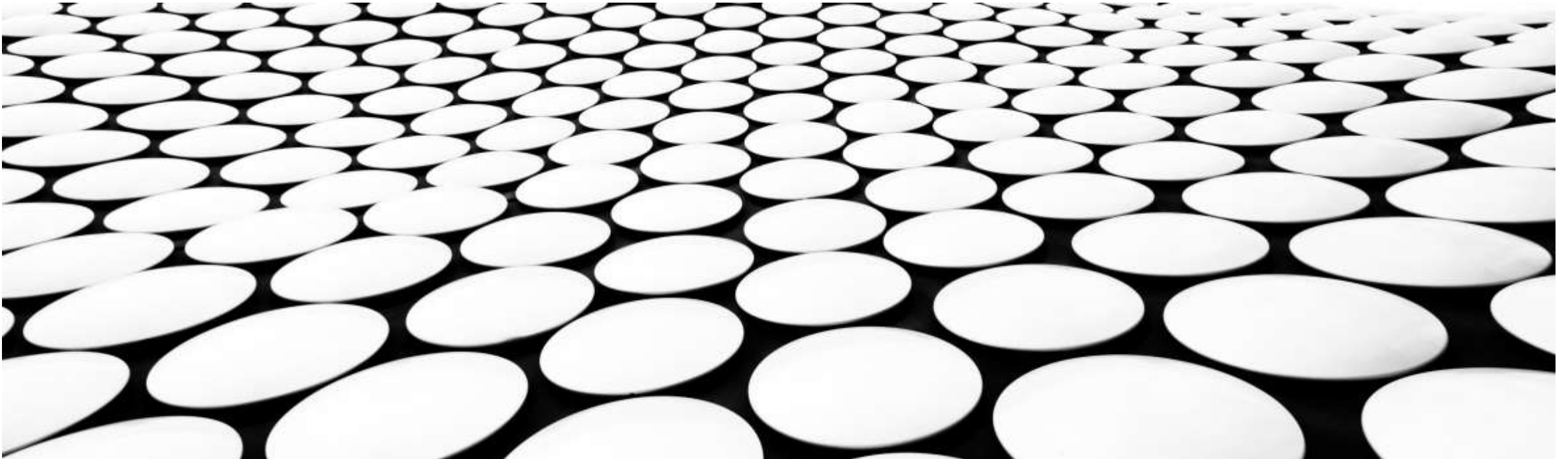


# COMPANY PROFILE



# JAPANESE-MADE BIAXIAL STRETCH-BLOW MOLDING MACHINE TO DEVELOP NEW IDEAS!

- Approximately 50 years after the birth of PET bottles. Frontier, Inc. has responded to customer needs and problems with “Biaxial stretch-blow molding machines made in Japan”. We have been and will continue to be a pioneer in improving our customers' products with our machines.



<https://youtu.be/zlgYKAhGupo>

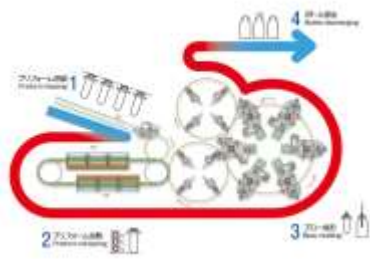
Our latest rotary blow molding machine  
FR-24S bottle output 800BPM



<https://youtu.be/CiLSuqvClul>

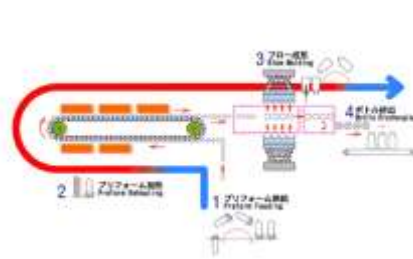
# ABOUT FRONTIER, INC.

- Since our founding in 1994, our mission has been to provide high quality, high performance blow molding machines that meet the needs of our customers by constantly incorporating the latest technology. In addition to manufacturing machines, the company also focuses on new technology development, prototype container development, and after-sales support.



Total sales of  
Rotary type machines

**53**  
units



Total sales of  
Liner type machines

**338**  
units



Total sales of  
Preform mold

**1,032**  
sets



Total sales of  
Blow mold

**1,777**  
sets



Number of applications  
for industrial property rights

**More than**  
**175**

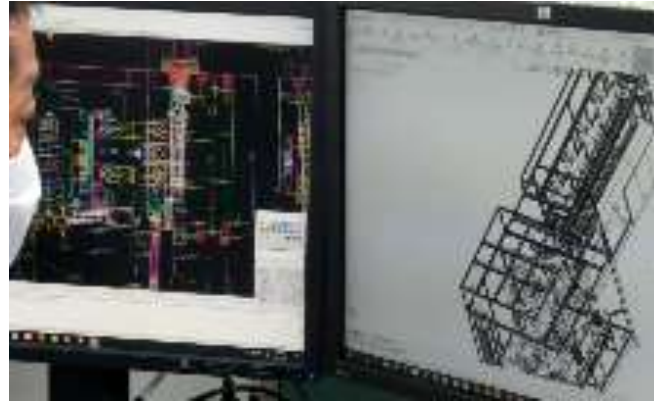
# BUSINESS INTRODUCTION

## PRODUCTION



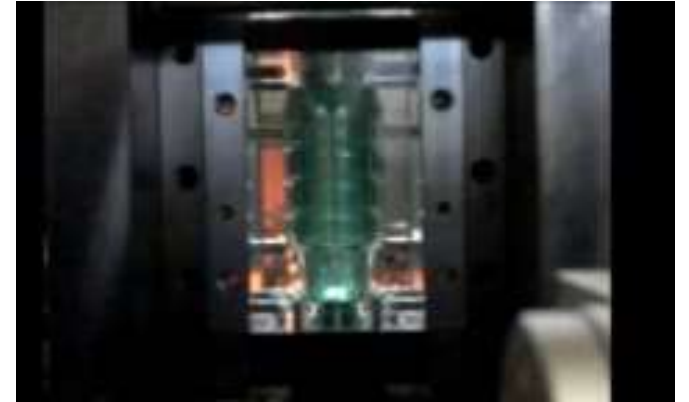
All blow molding machines are assembled at our own plants. We will also provide training before delivery to you, so please feel free to contact us.

## DESIGNS



Designed to meet customer needs and plant layout and production line construction, including container design, blow molding machine, preform mold, blow mold, and neck crystallization equipment.

## R & D



The R&D Technology Center has a number of testing machines to test the molds and materials used for prototype molds, which are used to reduce the weight of bottles and to test substitutes for materials.

# OVERSEAS SALES ACHIEVEMENTS SINCE 1994 TO 2024 (alphabetical order)



China



Hong Kong



Indonesia



Italy



Korea



Malaysia



Myanmar



Netherlands



Philippines



Singapore



Spain



Taiwan



USA



## LATEST LINE UP (1/3)

### Japan made Rotary Blow Molding Machine



#### FR Series

Production capacity	Over 6,000BPH
Bottle capacity	From 0.35L to 10L
Applications	Beverages / Seasonings / Oils / Pharmaceuticals, etc.
No. of Cavity	5 / 6 / 8 / 10 / 12 / 16 / 20 / 24

[https://youtu.be/AO\\_AAe\\_9jAk](https://youtu.be/AO_AAe_9jAk)

### New Linear High Cycle Blow Molding Machine



#### FB Series

Production capacity	Max. 6,000BPH
Bottle capacity	Up to 2.5L
Applications	Beverages / Seasonings / Oils / Pharmaceuticals, etc.
No. of Cavity	4 or 6

<https://youtu.be/kP10QkTELZw>

## LATEST LINE UP (2/3)

Equipped with SCARA robot  
Highly customizable Blow Molding Machine



### FX Series

Production capacity	Max. 2,000BPH
Bottle capacity	Up to 2.0L
Applications	High heat resistance / Flattening / Ultra thin wall
No. of Cavity	1 or 2

[https://youtu.be/9DhoZ\\_FKPxU](https://youtu.be/9DhoZ_FKPxU)

Specialized for Large Containers  
Blow Molding Machine



### FGB Series

Production capacity	Max. 600BPH
Bottle capacity	Up to 40L
Applications	Water server/ pressure-resistant containers
No. of Cavity	1

<https://youtu.be/Fe-y6Ux9hEc>

## LATEST LINE UP (3/3)

Specialized for Small and Thick-walled  
Containers Blow Molding Machine



### FYB Series

Production capacity	Max. 960BPH
Bottle capacity	Up to 0.45L (FYB-4L supports up to 2.5L)
Applications	cosmetic container with wall thickness exceeding 3 mm
No. of Cavity	4

<https://youtu.be/AljYpw4Le9g>

Specialized for Small volume Containers  
Blow Molding Machine



### FMB Series

Production capacity	Max. 1440BPH
Bottle capacity	Up to 0.35L
Applications	any container with Min. aperture diameter of 5 mm
No. of Cavity	1 or 2



# PRODUCTS FROM OUR MACHINES (1/4)

## General Purpose Food Containers

yogurt drink



Container with handle



Wide-mouth / in-mold containers



## Mineral water / Alcohol

Mineral water



Water server



Alcohol



## PRODUCTS FROM OUR MACHINES (2/4)

### Non-food containers

industrial component



LED light cover / Ping pong ball



PEN fire extinguisher



### Olefin resin-based

HDPE / LDPE



PP



PP



## PRODUCTS FROM OUR MACHINES (3/4)

### Large wide mouth / Heat resistant / Containers with handles

Large wide mouths



Heat resistant



Container with handle



### Special Applications

Ultra-small volume



Cosmetic Containers



Thin-walled cup





# PRODUCTS FROM OUR MACHINES (4/4)



# FROM PROTOTYPE BOTTLE TO MASS PRODUCTION MACHINE



## Development



- Prototype
- Evaluation

## Improvement



- Weight Reduction
- Alternative Material testing

## Innovation



- Making efficient
- Technological innovation



**Innovation**



**Reduce**



**Reuse**

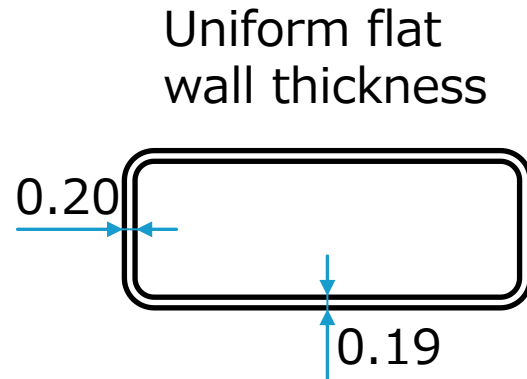


**Recycle**



**Renewable**

## EXAMPLE OF INNOVATIVE BLOW BOTTLE DEVELOPMENT (1/3)



### Topic : Reduce resin usage

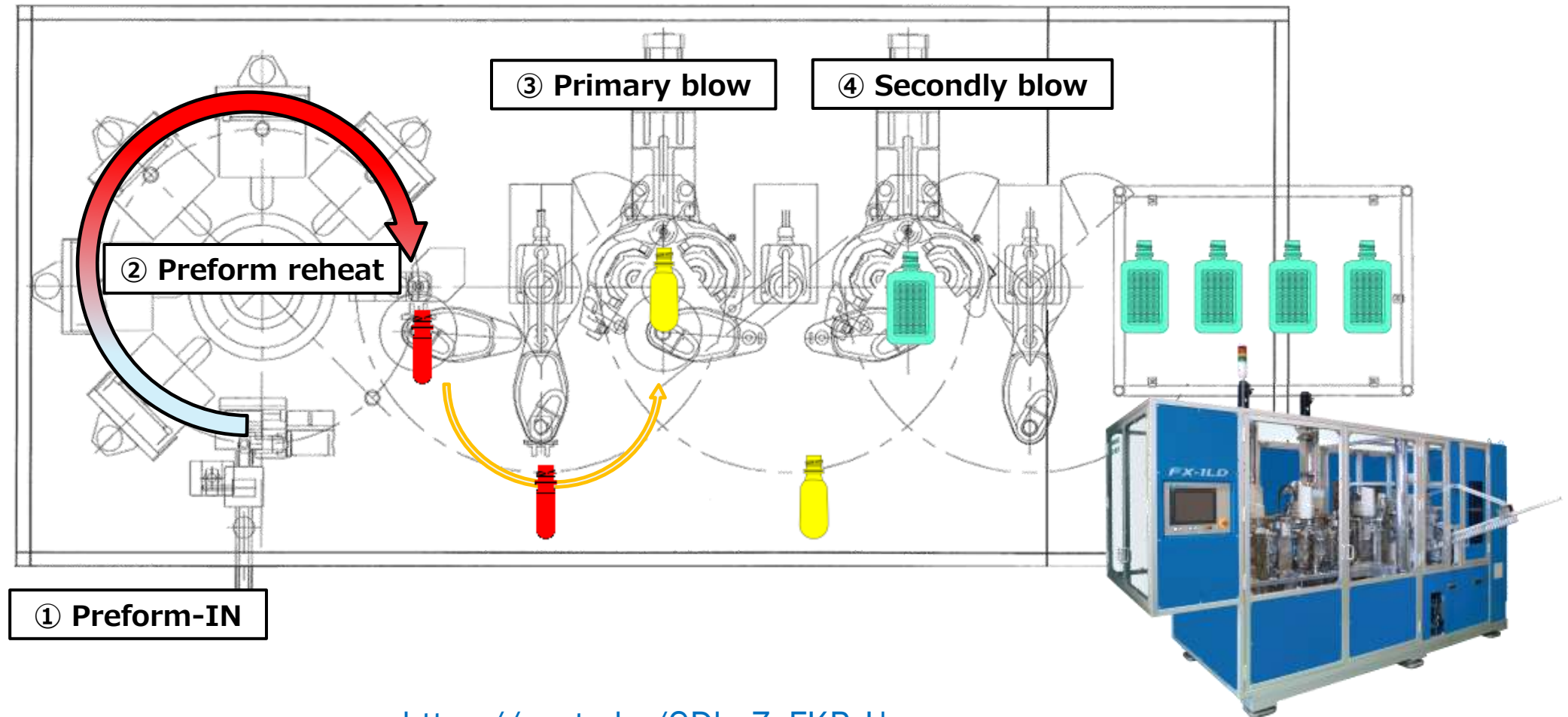
- Flattened shapes are difficult to make uniform in thickness
- Heating is difficult when increasing preform thickness to achieve uniformity



**Double-blow system for uniform wall thickness on long and short sides!**



# IMAGE OF DOUBLE-BLOW PRODUCTION SYSTEM



[https://youtu.be/9DhoZ\\_FKPxU](https://youtu.be/9DhoZ_FKPxU)

Innovation by FX-1LD

## EXAMPLE OF INNOVATIVE BLOW BOTTLE DEVELOPMENT (2/3)

### Topic : Blowing technology for paper + PP composite resin



- Eco-friendly material containing paper powder
- Fewer calories burned than general-purpose resins
- Binder is PP ➡ Excellent heat resistance
- Paper content is 51%

Can be disposed of as paper in Japan.  
Reduced CO2 emissions.

## EXAMPLE OF INNOVATIVE BLOW BOTTLE DEVELOPMENT (3/3)



特許第6857375号

(PATENT NUMBER 6857375)

### Topic : RFID tag built into a 2-layer bottle

- Expectations for RFID as a business improvement and security measure
- Attaching RFID near liquids reduces readability
- Bottle + RFID was thought to be impossible

In addition

RFID tag built into the neck to prevent damage to the IC chip and counterfeiting

<https://youtu.be/amu86QX0-js>

## FINALLY

- We provide biaxial stretch blow molding machines on a make-to-order basis. We accept general-purpose blow machines as well as one-off and special machines.
- Please feel free to contact us for machine design according to your requirements.

E-mail : [info@frontier-inc.co.jp](mailto:info@frontier-inc.co.jp)