

ASANOLAB

ASANO Laboratories

GENERAL CATALOG



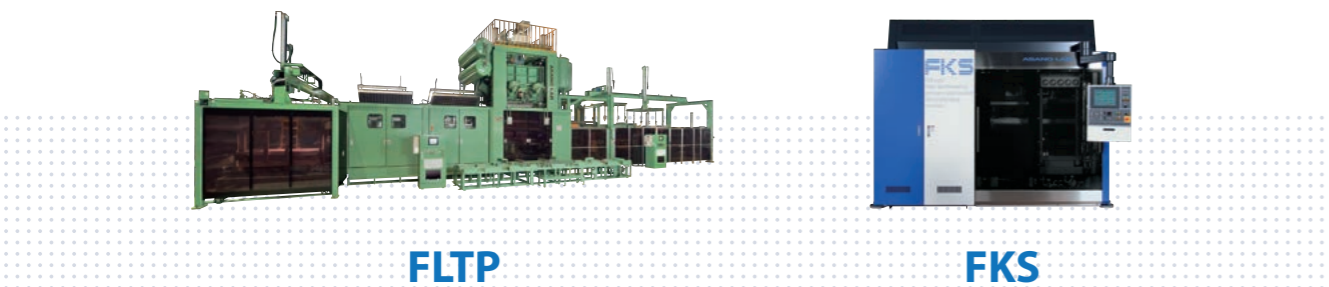
Roll sheet GENERAL MACHINE



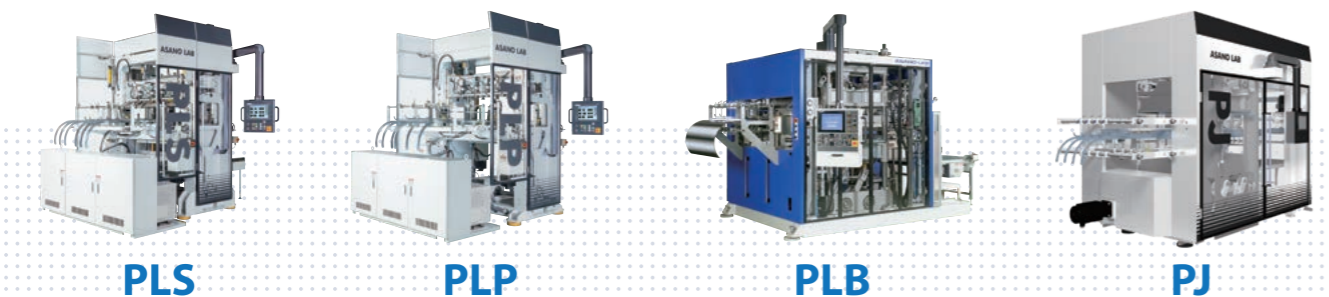
Roll sheet SPECIAL MACHINE



Cut sheet




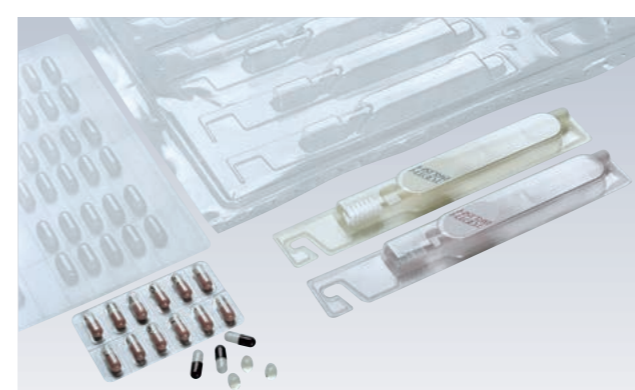
Trimming machine




 **Food Container**
FLC / CLS / FKS / FI / FJ / FTS





 **Industrial tray**
FLC / FLB / FKS / FJ / FTS




 **Blister pack**
FLC / FLB / FKS / FJ / FTS




 **Emblem**
FKS / FLC

 **Interior**
FKS / FLC



 **Refrigerator**
FLCR / FLTP / FIR

 **Bathtub**
FCS / FCSP



 **Signboard**
FCS / FCSP

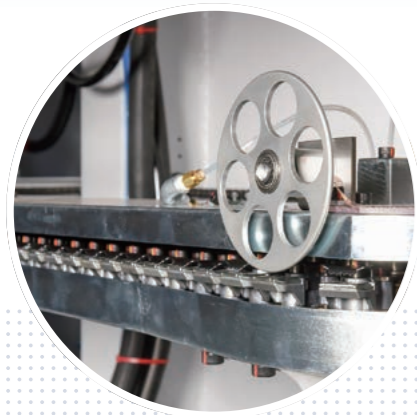
FLC + PLP + PLS 1 LINE SOLUTION

We propose a one-line solution from rolled sheet to final product.

POINT 1

Grip chain equipment

We provide stable sheet conveyance and prevent the generation of chip dust.



POINT 3

Equipped with a safety sensor as standard.

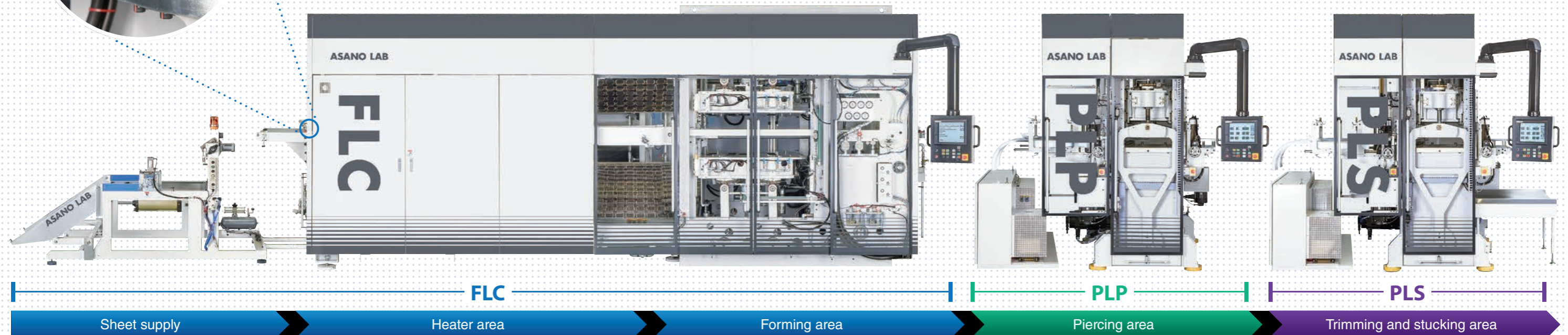
Asano's products come standard with a safety sensor. Prevents workplace accidents during product operation.



POINT 4

Feed device with 4-wheel drive (optional).

By equipping a 4-wheel drive system for the PLP/PLS feed device, it prevents sheet deviation, enabling stable sheet conveyance. Stable sheet conveyance enables a trimming speed of 146spm, providing high productivity.

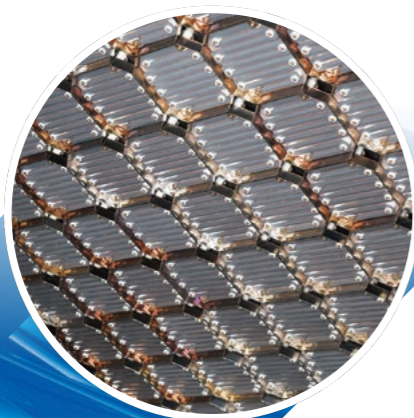


POINT 2

Equipped with Quick Response Heater.

This heater system is developed by ASANO.

- Quick Response: Heats up to 520°C in 10 seconds, contributing to energy savings.
- Sheet temperature control: Adjustable output for each individual heater.
- Enables heating methods adjusted to the product shape.



Furthermore, it can be combined with continuous packaging machine and crusher.

Automating the production line enhances productivity and work efficiency.

Without PLP is also available. We propose the most suitable machinery and equipment for your plant.

FLC type



High-performance pressure and vacuum thermoforming machine



Feature

- Sheet feeding**
 - Strong grip chain feeding, No plastic chip.
- Heating method**
 - Quick response heater, excellent in response, most suitable for sheet heating.
 - Sheet temperature feedback control.
- Forming table**
 - The position and speed control by using AC servo motor and crank mechanism make possible high speed and stable forming.
- High response valve**
 - Possible to operate with the high cycle speed and most suitable vacuum timing by the valves of our own development.
- Rail width enlargement & sheet lifting device**
 - Possible to form the sheet with big draw down by using rail width enlargement device in the forming station and sheet lifting device in the heater station.

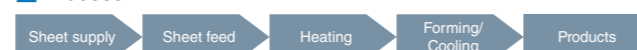
The features of FLC-415PC6-GS

- Feed speed of 3,000 mm/s (1.5 times faster than the conventional speed).
- Table speed exceeding Max. 1,000 mm/s (1.2 times faster than the conventional speed).
- Clamping force of 650 kN (compatible with compressed air pressure of 0.6 MPa).
- Rail width adjustment speed, 5 times faster than the conventional speed.
- Table shut height movement speed, 2 times faster than the conventional speed.
- Improved accessibility of the mold exchange cart.
- Standardization of the reduction gear for the vertical table drive.

Specification

Model	FLC-415PC6-Q2-GS-EX
Max. forming area	1,000 (W) × 1,100 (L) mm
Min. forming area	560 (W) × 600 (L) mm
Max. forming depth	150 mm
Forming method	Pressure and vacuum (Straight, drape, plug assist, matched mold)
Sheet feeding method	AC servo motor drive, Grip type chain
Heater	Quick response heater, 2stage heating
Sheet surface temp. Detector	Measure sheet surface temp. by pyrometer and control the heater
Forming table driving method	Crank type by AC servo motor drive
Max. mold clamping force	650kN
Mold change device	Mold changer inside the machine
Control	Full automatic, PLC control

Process



PLP type

Continuous piercing machine



Specification

Model	PLP5-415B3-R-D-GS-EX
Drop down hole size	1,080 (W) × 350 (L) mm
Max. forming depth	150 mm
Max. forming speed	146spm
Trimming force	50kN
Trimming method	Crank type by AC servo motor drive
Sheet feeding method	AC servo motor drive, double roll fed type
Control	Full automatic, PLC control

Feature

- High productivity**
 - Connected with PLS type machine enables to pierce and cut with high speed.
- Safety**
- High accuracy, high rigidity**
- Easy operation and high repeatability**
 - Touch panel digital setting.
 - Trimming data control by computer (option).
- Clean and low noise**
- Available change the mold from operator side**

Process



PLS type

Continuous trimming machine



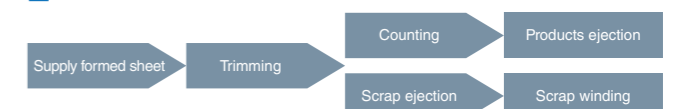
Specification

Model	PLS7-415B5-R-D-GS-EX
Max. trimming area	1,050 (W) × 320 (L) mm
Max. forming depth	150 mm
Max. trimming speed	146spm
Trimming force	70kN
Trimming method	Crank type by AC servo motor drive
Sheet feeding method	AC servo motor drive, double roller feed type
Control	Full automatic, PLC control

Feature

- High productivity**
 - High speed production.
 - Decrease mold change time.
- Safety**
- High accuracy, high rigidity**
- Easy operation and high repeatability**
 - Touch panel digital setting.
 - Trimming data control by computer.
- Clean and low noise**
- Available change the mold from operator side**
- Advanced interlocking control**

Process



CLS type



Hot plate heating type pressure thermoforming machine



Specification

Model	CLS-532.3-EX	CLS-542.3-EX
Max. forming area	1,050(W) × 1,200(L) mm	
Min. forming area	600(W) × 650(L) mm	
Max. forming depth	100 mm	
Forming method	Air pressure forming with sheet heating on metal plate (Available vacuum forming)	
Sheet feeding method	AC servo motor drive, Grip type chain	
Heater	Aluminum casting heater	
Forming table driving method	AC servo motor drive, double toggle type	
Max.mold clamping force	600kN	
Mold change direction	Inlet side	Operation side
Control	Full automatic, PLC control	

Feature

- High productivity**
 - High cycle speed.
 - Minimize the time for mold changeover.
 - High speed response forming circuit.
- Improvement of forming**
 - More transparent product surface by the improvement of hot plate surface.
 - Possible to set up mold clamping force.
 - Possible to use air circuit corresponding to forming area.
 - Easy to control the surface temperature of hot plate.
- Easy operation and high repeatability**
 - Digital screen by touch panel.
 - Data control by computer.
 - High accurate servo motor.
- Others**
 - Equipped with maintenance pre-notice function.

Process



FI type



High-performance in-mold cutting thermoforming machine



Specification

Model	FI 33-1.2-EX
Max. forming area	800(W) × 600(L) mm
Min. forming area	550(W) × 400(L) mm
Max. forming depth	Draw negative 150 mm
Forming method	Pressure and vacuum (Straight, drape, plug assist, matched mold)
Sheet feeding method	AC servo motor drive, Grip type chain
Heater	Quick response heater
Sheet surface temp. Detector	Measure sheet surface temp. by pyrometer and control the heater
Forming table driving method	Crank type by AC servo motor drive
Max.mold clamping force	400 kN
Mold change device	Mold changer inside the machine
Control	Full automatic, PLC control

Feature

- High-accuracy of positioning
- Compact and space saving
- No angel hair comes out at the time of cutting film layers such as EVOH
- The mold cost is cheaper and shorter delivery time than the conventional punch and die type



Process



FLB type



High-mix low volume production compliant small continuous vacuum thermoforming machine



Specification

Model	FLB-21-1.3-EX	FLB-31-1.3-EX
Max. forming area	600(W) × 1,000(L) mm	800(W) × 1,000(L) mm
Min. forming area	360(W) × 300(L) mm	460(W) × 300(L) mm
Max. forming depth	Draw positive 100mm, negative 100mm	
Forming method	Vacuum forming	
Table drive force	20kN	
Heater	1 stage upper and lower heating by quick response heater	
Sheet feeder	Grip type chain, AC servo motor drive	
Traveling knife cutter	Included	

Feature

- Best for high-mix low volume products**
 - Standardize the water cooling base. Reduction time required cavity change.
 - Vacuum type cavity mount. No need masking tape or bolting.
 - Easy data management. Read-modify-write-storage operation by touch panel.
- Easy temperature control by quick response heater and sheet temp. control**
- Prevent from plastic powder by grip type chain sheet feeder**
- Excellent formability by sheet feeding chain rail enlargement system**

Process



FLTP type



Pressure and vacuum thermoforming machine



Specification

Model	FLTP-11802-54-1.2-EX
Max. forming area	1,250(W) × 2,150(L) mm
Min. forming area	300(W) × 460(L) mm
Max. forming depth	800mm
Forming method	Pressure and vacuum
Sheet feeding method	AC servo motor drive, spike chain type
Heater	Quick response heater
Sheet surface temp. Detector	Thermometer (Keyence)
Forming table driving method	AC servo motor drive, Ball screw type
Max.mold clamping force	540kN
Control	Full automatic, PLC control

※ Available other forming size

Feature

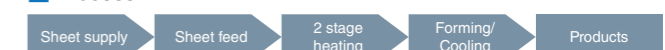
- Minimize defective products ratio, high productivity
- Easy operation and high repeatability
- Most suitable sheet heating



Refrigerator inner liner and door liner



Process



FKS type



Compact multifunction pressure and vacuum forming machine



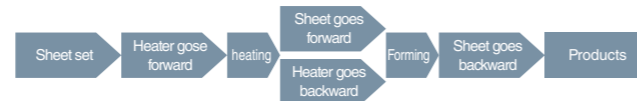
Feature

1. Ideal machine for cut sheet in order to develop new parts and production for a wide variety of parts in small lot
2. Radiation heating time by Quick response heater
3. Forming
 - Excellent forming repeatability. Sheet feed and table movement by AC servo motor drive.

Specification

Model	FKS-0432.2-20-EX	FKS-0632.2-20-EX
Max. forming area	390 (W) × 390 (L) mm	600 (W) × 600 (L) mm
Max. forming depth	150 mm	
Forming method	Strait, drape and plug assist vacuum and pressure thermoforming machine	
Sheet clamp/feed	Toggle clamp (manual) / AC servo motor drive	
Heater	Both surfaces heat by quick response heater, each element phase control	
Forming table	Mold clamping force 200kN, AC servo motor drive	
Control	Fully automatic, PLC control, heater power control, data management system and 12.1 color touch panel display	

Process



PLB type

One shot whole trimming with steel rule die cutting



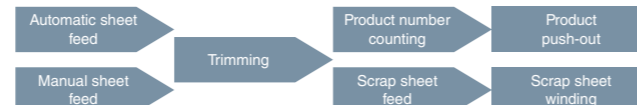
Feature

1. Reduction of labor cost and in-process inventory by automation
2. Dual-use for continuous trimming and one cut forming sheet trimming
3. Automatic trimming positioning device
4. Reduction of mold price and adjustment trimming time by one-line trimming

Specification

Model	PLB-2-1.2-EX	PLB-3-1.2-EX
Max. trimming area	600 (W) × 600 (L) mm	800 (W) × 600 (L) mm
Min. trimming area	360 (W) × 300 (L) mm	460 (W) × 300 (L) mm
Max. trimming depth	Draw positive 100mm, negative 100mm	
Trimming force	450 kN	
Sheet feeding method	Grip type chain	
Product ejection	Vacuum unit travelling type, AC servo motor drive	

Process



FJ type



High-performance pressure and vacuum thermoforming machine



Feature

1. Quick response heater
 - Asano original heater.
 - 520 degrees within 10 sec.
 - Excellent temperature control.
2. Table drive
 - AC servo motor.
 - Crank mechanism.
3. High speed response valve
 - Asano original integrated valve.
4. Rail expansion system
 - Prevent big draw down.
5. Forming area
 - Best for small lot size. Common forming area. Save mold cost.

Specification

Model	FJ-2-2-EX	FJ-2-4-EX
Forming area	Max. 750 (W) × 580 (L) mm	
Forming depth	Max upper lower draw positive 120mm	
Sheet transfer	Spike chain	
Heater	Asano quick response heater, 2 stages	Asano quick response heater, 4 stages
Forming area	AC servo motor drive	
Mold change direction	Outlet side	

Process



PJ type

Continuous trimming machine



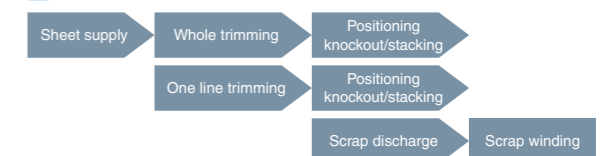
Feature

1. High productivity
 - High speed trimming by servo motor drive.
 - Product stacking function.
 - Interlocking with Asano thermoforming machine. Stable production.
2. Safety
 - Friendly maintenance.
3. High accuracy, high rigidity, clean, low noise
4. Friendly operation, high repeatability
 - Touch panel.
 - 300 molds data storage.
5. Easy mold change
 - Save down time.
6. Steel rule die cutting
 - Good for small lot size, save mold cost.

Specification

Model	PJ-2-EX
Trimming area	Max. 750 (W) × 580 (L) mm
Max. product height	Upper / lower draw positive 120mm
Transfer	AC servo motor drive, Grip transfer
Knock out	AC servo motor drive, conveyor belts included

Process



FIR type



Cut in place thermoforming machine



Feature

1. Many ingenious superiorities
2. High productivity
3. High quality
4. Stable operation
5. User friendly

Specification

Model	FIR-11152-1.2-EX
Max. forming area	1100(W) × 2200(L) mm
Min. forming area	480(W) × 1000(L) mm
Max. forming depth	150 mm
Sheet thickness	0.6-2.0 mm
Heater stage	Upper 2-stage and lower 1-stage
Control	Fully automatic, PLC control

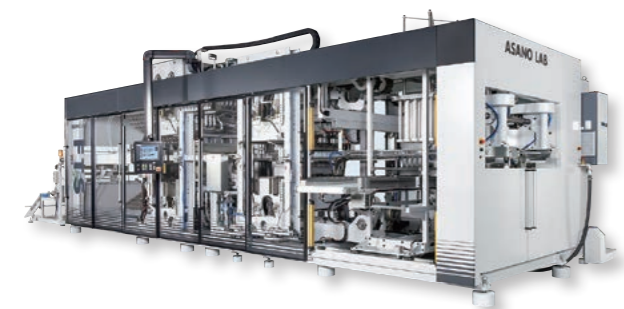
Process



FTS type



High-speed continuous pressure and vacuum thermoforming machine



Specification

Model	FTS-310PC1-Q3-EX
Max. forming area	780(W) × 570(L) mm
Min. forming area	450(W) × 400(L) mm
Max. forming depth	100 mm
Heater stage	Upper and lower 3-stage
Heater	Quick response heater
Sheet feeding method	AC servo motor drive, grip chain
Max. forming force	260 kN
Trimming table driving method	Crank type by AC servo motor drive
Trimming force	600 kN
Control	Fully automatic, PLC control

Feature

1. Space saving & reduction of operators
 - The machine is composed of heating, forming, trimming and products unloading equipment
2. High productivity
 - Reduction time required for mold change
 - Reduction time required for start-up
 - Prevent from plastic powder by grip type chain sheet feeder
3. Safety measures
 - Enhanced safety equipment for worker protection
 - Protection against fire by over sag detection
4. Easy operation & high repeatability
 - Data management by computer
 - Automatic sheet temperature control
 - Digital setting Touch panel
 - Maintenance pre-notice function
5. Saving energy, clean and low noise

Process



Asano Laboratories Co., Ltd.

Asano creates new value by selecting and blending various excellent individual elements.

Asano Laboratories Co., Ltd is a world leading manufacturer of thermoforming machines for thermoplastic sheets. We offer wide range of machines such as vacuum forming machine, pressure and vacuum forming machine, hot plate (contact) heating type pressure forming machine, forming machine synchronized and combined with sheet extruder, test machine, trimming machine and others.

Company Profile

Corporate Name : Asano Laboratories Co., Ltd.

Capital : J. Yen 546,850,000

Annual Sales : J. Yen 6,830,000,000 (2018)

Establishment : October 7, 1953

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 HP : <https://www.asano-lab.co.jp>
 E-mail : info@asano-lab.co.jp

Staffs and Employees : 130



History

- 1953 Founded by Kazuo Asano at Miyukiyama, Tempaku-ku, Nagoya, and production and sale of high-frequency welders are begun.
- 1955 Production and sale of thermoforming machines are launched.
- 1961 Production elements relocated to new plant in Togo-cho, Aichi-gun, Aichi Prefecture.
- 1969 No.3 Plant is built.
- 1973 Head Office relocated to Iwata Building in Nishiki, Naka-ku, Nagoya. No.4 Plant built.
- 1978 Late Kazuo Asano appointed as President and CEO.
- 1984 No.4 Plant is expanded.
- 1986 Cosmo Equipment Sales Co., Ltd. established to dedicated to the sales of the Asano products.
- 1990 Received Distinguished Supplier Award from General Electric (USA) in appreciation of Asano's high-performance thermoforming machines supplied for their refrigerators.
- 1991 New Head Office building (three stories) completed.
- 1992 Head Office relocated from Nagoya and consolidated upon the completion of new employee housing. Joining TSUKISHIMA KIKAI CO., LTD. Group.
- 1997 No.5 Plant and Painting Plant added.
- 2004 Independence from TSUKISHIMA KIKAI CO., LTD. through a Management Buyout (MBO).
- 2005 No.4 Plant is expanded.
- 2007 Concluded License Agreement with Sencorp Inc., MA, USA.
- 2011 Exhibited actual machine in Chinaplas for the first time.
- 2012 TFH machine Got the 24th SMB new excellence technique product prize. Toshihiro Takai appointed as President and CEO.
- 2016 R&D center open.
- 2017 Total number of machine production exceeded 6,000 units.
- 2019 Asano Demo Center established at Shanghai Yishi trading Co., Ltd Exhibition Technology Center.
- 2023 The Shanghai Demonstration Center has been relocated to Tianjin.
- 2024 Constructed a new plant in Miyoshi City, Aichi Prefecture.

The sales results in the world

As of 2019

Export 870 machines since 1966



ASANO Global Networks

Asano Laboratories have sold over 6,000 thermoforming and after treatment machines not only in Japan but 26 countries around the world.

Japan

DAIICHI JITSUGYO CO., LTD.

Ochanomizu Sola City, 4-6 Kandasurugadai,
Chiyoda-ku, Tokyo 101-8222
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FAX. 81-3-6370-8601
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SOJITZ MACHINERY CORPORATION

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<https://www.sojitz-mac.com>

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TIANJIN ZHONGJIN PROMINENT HERO IMPORT & EXPORT TRADING CO.,LTD [Sales and Maintenance]

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AMERICA

DAIICHI JITSUGYO (AMERICA), INC.

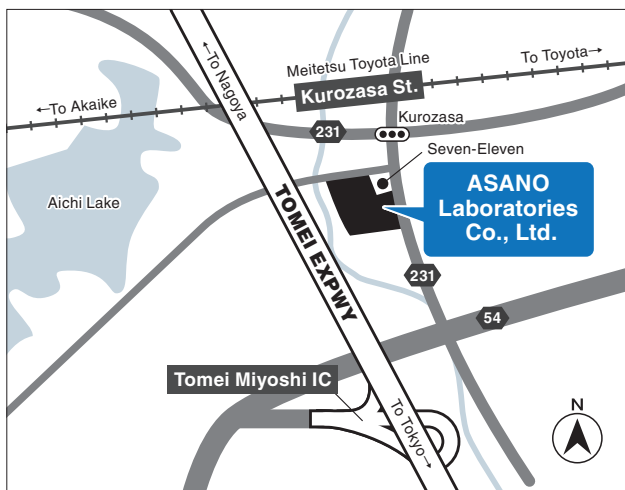
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