

Comprehensive R2R Solutions

Test Coating/ Contract Coating/ Consultation

***Revolutionary Coating for
Next Generation Technology***

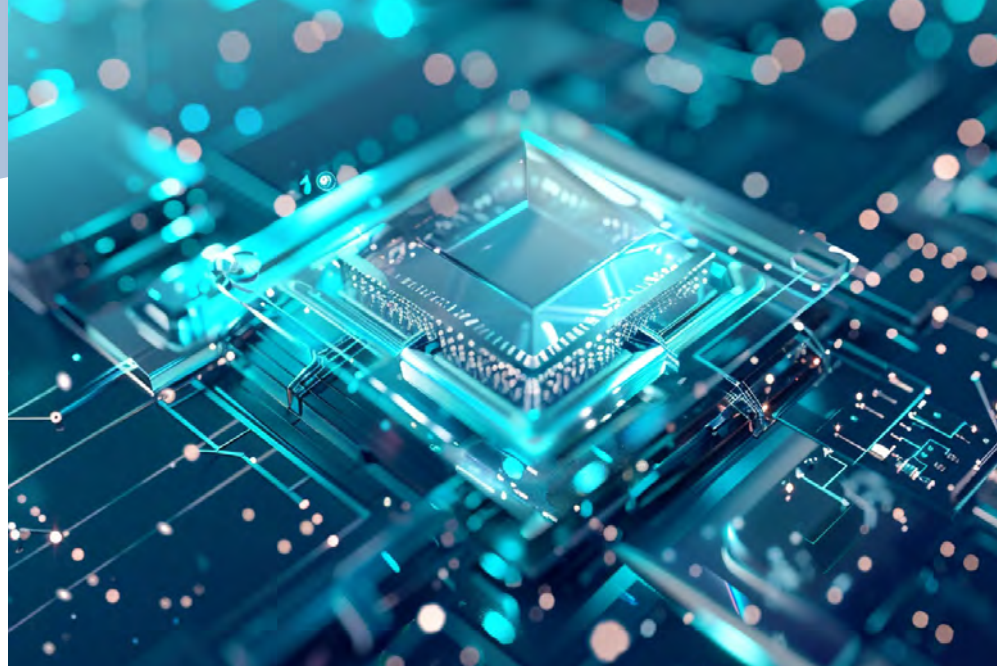
MIRWEC Coating

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Experience the world-famous, Yasui Seiki-patented technologies that have supported Japan's leadership in the flexible thin film industry.



MIRWEC Coating's expertise in flexible thin film coating and web handling has been cultivated through over 45 years of test and contract coating collaborations with major corporations in Japan.

Applications:

Displays	Labels	Photovoltaics
Electronics	Food Packaing	Filters
Energy Storage	Medical	Window Films
	Pharmaceutical	and more



WHO WE ARE

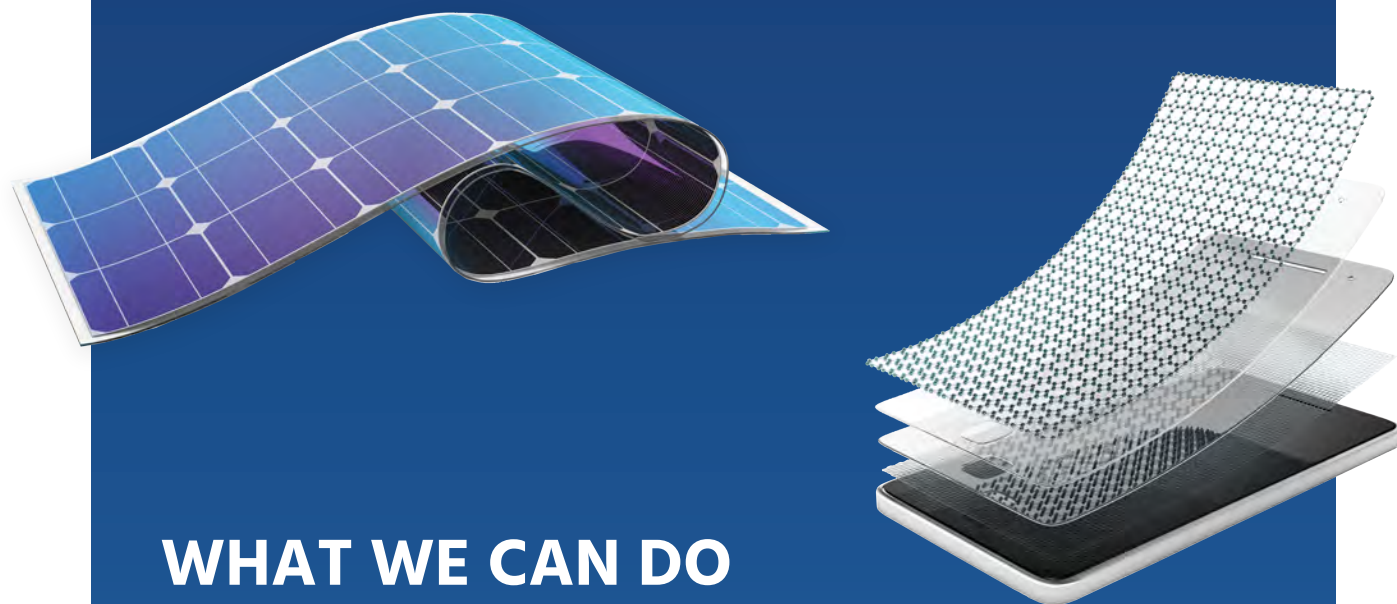
As a precision coating technology consultant, developer, and coating machine designer and manufacturer, Yasui Seiki spent the last 40 years developing precision coating technologies for ultra thin, submicron coatings essential for today's most advanced products.

Our patented MICROGRAVURE™ and slot die coating technologies are critical to industries such as polymer science, electronics, photonics, batteries and capacitors, and they have been playing key roles in Japan and other Asian countries for many decades.

What sets us apart from other coating machine manufacturers is that we have our own coating R&D centers (Labo and Omura Research Center) in Japan where we conduct R&D projects in collaboration with major Japanese corporations and universities alike. All findings from the R&D centers are directly reflected to the design of our coating machines. We have also developed our own set of validation and verification procedures for coating machines, which results in one-of-a-kind, well-orchestrated custom coating machines with unique components.

Yasui Seiki is not just a coating machine manufacturer; we are inventors of new technologies - MICROGRAVURE™, tungsten carbide lip slot die, and superheated steam dryers, to name a few. Yasui Seiki produces most of the precision parts in-house, machined to within 1/1000th of a millimeter. We pay attention to details, and we pay attention to the harmony of the entire coating machine. This is where Yasui Seiki's know-how shines vividly. We don't just assemble parts; we make them work together to manifest precision no one else can.





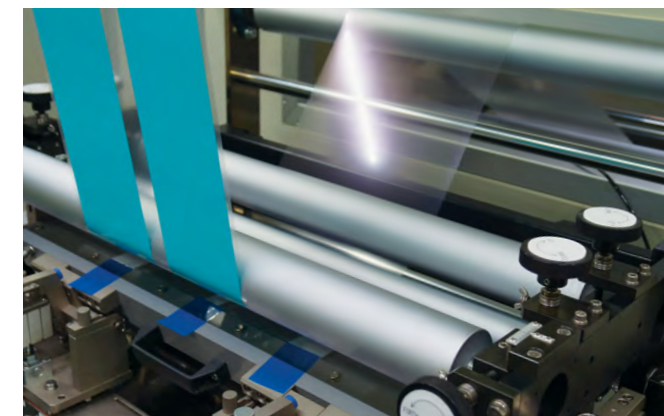
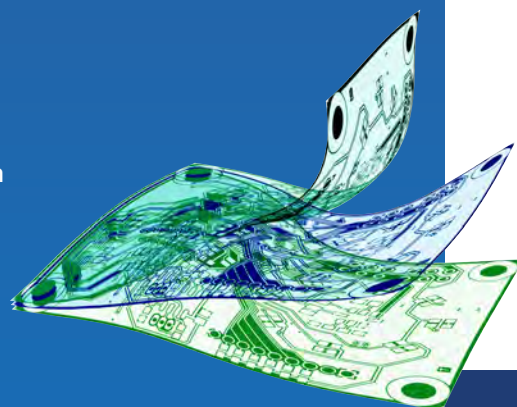
WHAT WE CAN DO

Our test and contract coating services give you access to Yasui Seiki's cutting edge, precision thin film coating machines equipped with patented MICROGRAVURE™ and slot die coating systems.

We provide high quality thin and uniform coating services to major corporations around the world. Our unique technology and know-how was cultivated by Yasui Seiki's profound knowledge in coating machines and Labo Japan's extensive experience in coating techniques.

Yasui Seiki's patented MICROGRAVURE™ technology has been the answer to many years of struggle for numerous companies around the world. Our perfectly aligned, impeccably accurate coating machines can create products no other machine can. If you are looking for thin, stable and uniform coating, look no further. Coat with us!

- Small to large machines with various features and widths
- Class 1000 & 3000 clean rooms
- Onsite mixing
- Onsite chemical and coating consultation
- Consultation with a Senior Coating Engineer from Labo Japan
- Flexible coating application lengths



OUR CAPABILITIES

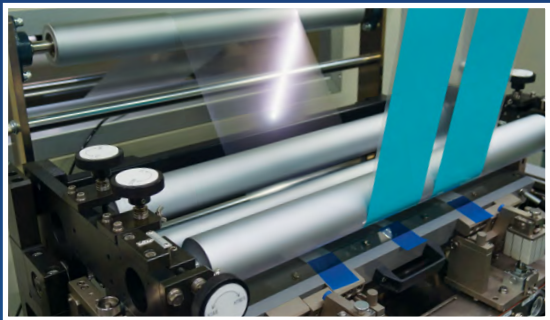
Coating Methods	MICROGRAVURE™, slot die, knife
Solutions	Aqueous, solvent, non-solvent
Coating Thickness	1 to 1,200 microns (wet)
Coating Width	10 to 1,600 mm (0.4" to 63")
Substrate Thickness	6 to 750 microns
Substrate Types	Film, foil, non-wovens, paper
Line Speed	0.2 to 50 mpm
Drying Methods	Convection, floating or roll-supported, IR
Other Capabilities	UV cure, corona treater, dry laminator, interleaf peeler

IS-700

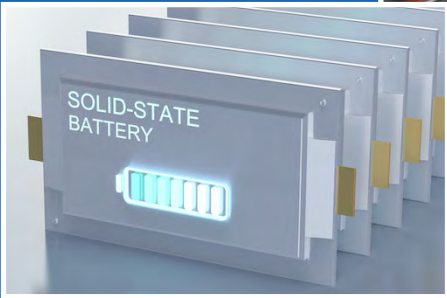
Cleanroom Class 1000

IS-700 is the manifestation of the most current, cutting edge Yasui Seiki technology. It offers the latest generation of MICROGRAVURE™ coating head, encased in a strictly maintained Class 1000 cleanroom.

The 12 meter long, driven roll-supported hot air dryer comes with a new clamshell feature, which allows easier access for thorough cleaning.

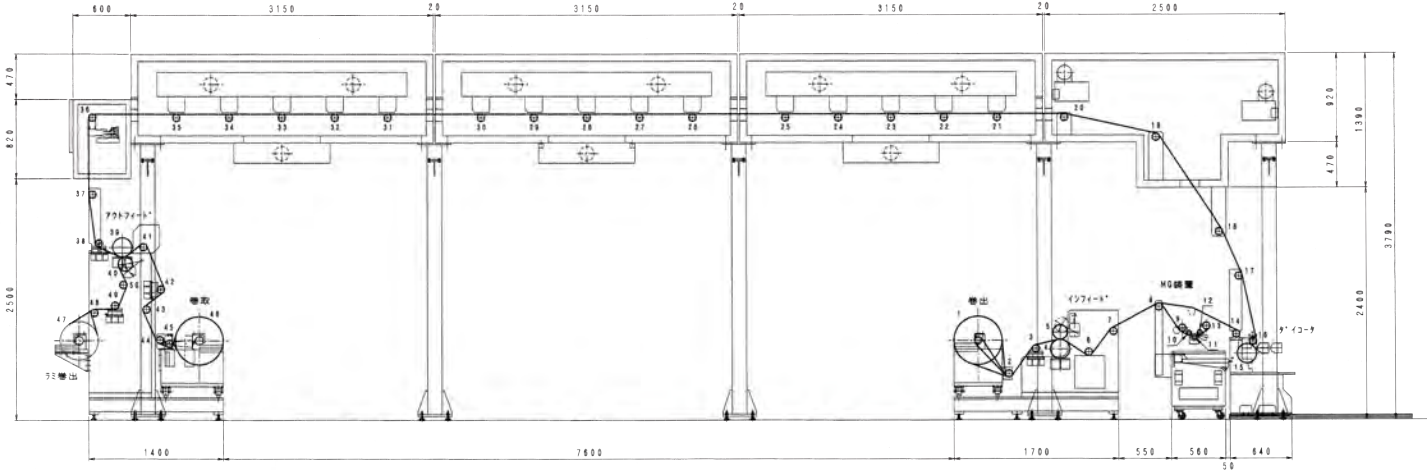


State-of-the-art clamshell roll support dryer



Coating Methods	MICROGRAVURE™, slot die
Max. Coating Width	700 mm (27.5")
Max Web Width	740 mm (29")
Dryer	150° C (302° F), 12 m (39') driven roll-supported hot air dryer
Line Speed	Up to 25 mpm (82 fpm)
Dry Laminator	Yes
Clean Room	Class 1000

SPECIFICATIONS





IS-1600

Coating Up to 1600mm Wide

IS-1600 is our largest and longest coater. It is equipped with corona treater, UV cure, dry laminator and interleaf peeler. IS-1600 is capable of coating up to 1600 mm (63") wide with Yasui Seiki patented MICROGRAVURE™ and up to 1200 mm (47") wide with slot die coating.

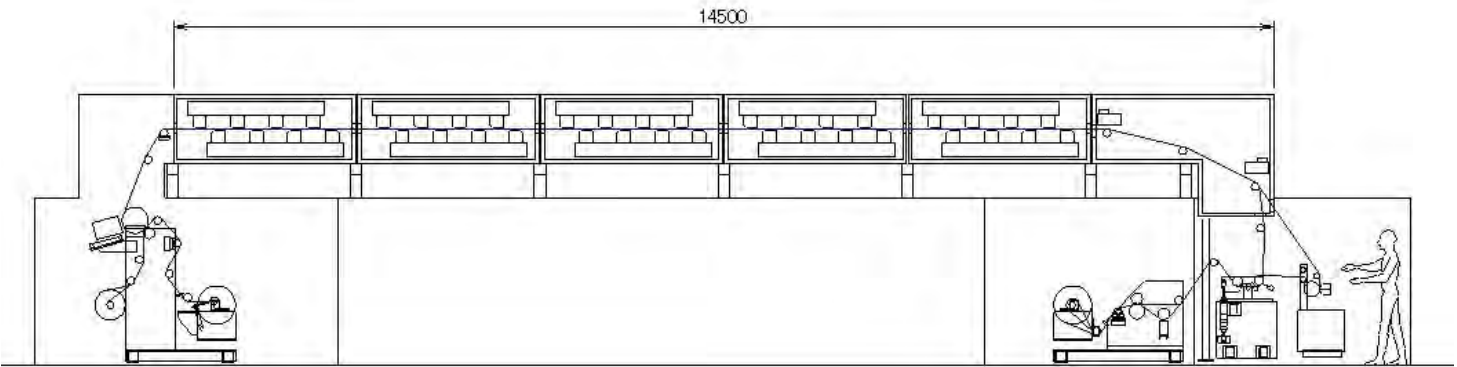
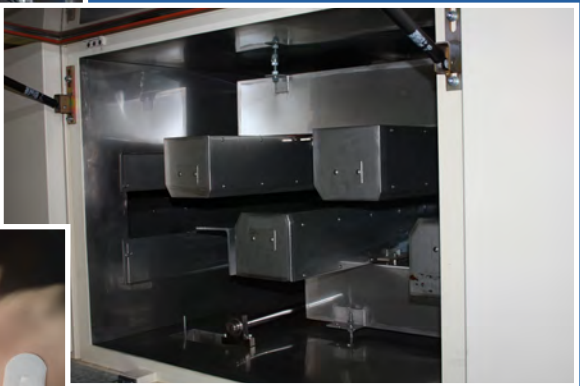
IS-1600 is suitable for making small- to large-scale market samples or for production.

SPECIFICATIONS

Coating Methods	MICROGRAVURE™, slot die, knife
Max. Coating Width	1600 mm (63"), 1200 mm (47") width slot die
Max. Web Width	1600 mm (63"), 1200 mm (47") width slot die
Dryer	160° C (320° F), 15 m (49') floating dryer
Line Speed	Up to 50 mpm (164 fpm)
UV Cure	200, 300 WPI mercury lamp
Corona Treater	Yes
Dry Laminator	Yes
Clean Room	Class 300



Counterflow & Floating dryer

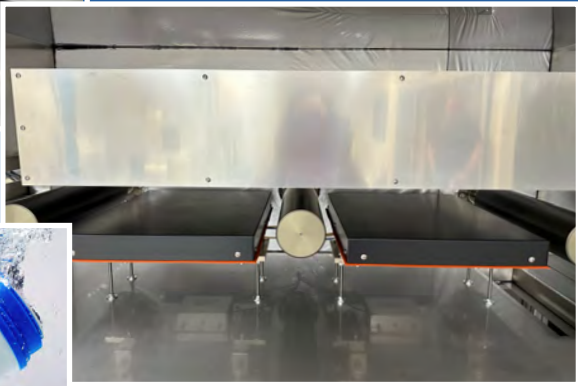
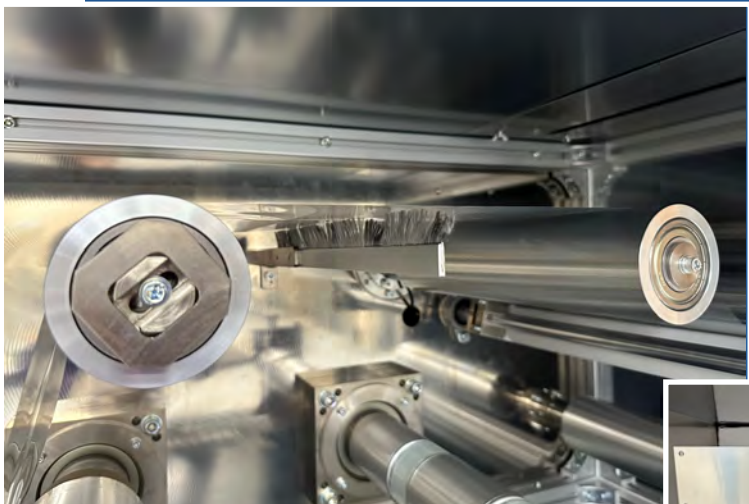


TRI-Coater™

Thin-to-Thick Roll-to-Roll Coating

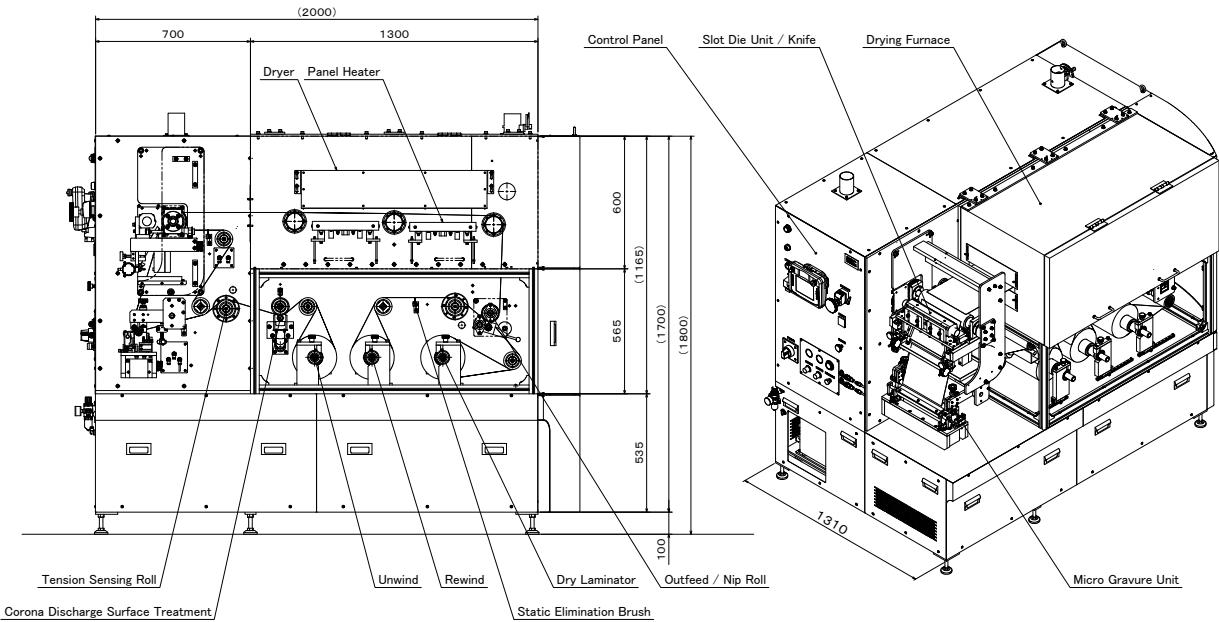
Introducing Yasui Seiki's newest packaged coater, the TRI-Coater™. This all-in-one, thin-to-thick roll-to-roll test coater features MICROGRAVURE™, slot die, and knife coating heads. It boasts variable coating angles for the slot die and automatic tension control with a detachable touch panel.

A perfect high-end pilot coater for creating reliable market samples.



Coating Methods	MICROGRAVURE™, slot die, knife
Max. Coating Width	250 mm (9.8")
Max. Web Width	300 mm (11.8")
Dryer	180° C (356° F), 1.3 m (4.3') roll-supported hot air with IR panels
Line Speed	0.1 to 2 mpm (0.3 to 6.6 fpm)
Corona Treater	Ceramic Electrode
Dry Laminator	Yes

SPECIFICATIONS



μCoater™ 350 300mm Wide Small Pilot Coater

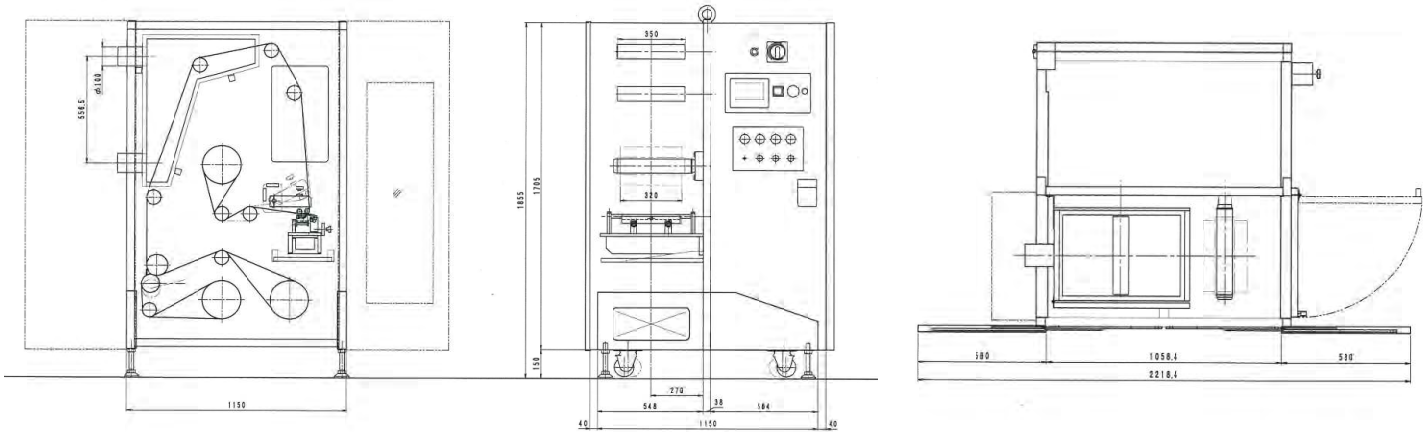
μCoater™ 350 is a small and compact smart pilot coater with PLC.

It is quick to set up and easy to clean up. Perfect for making narrow web market samples or low volume production.



SPECIFICATIONS

Coating Method	MICROGRAVURE™
Max. Coating Width	300 mm (12")
Max. Web Width	340 mm (13.4")
Dryer	130° C (266° F), 1 m (3.3") long hot air dryer
Line Speed	0.5 to 5 mpm (1.6 to 16.5 fpm)
UC Cure	300 WPI mercury & metal halide lamps



βCoater™ Knife-Over-Plate Coater

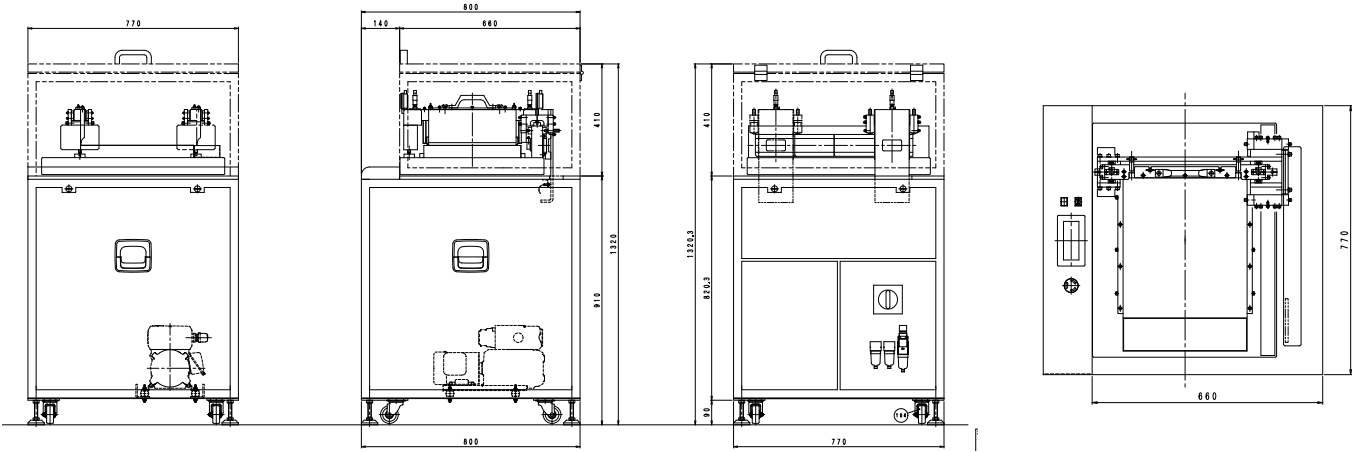
βCoater™ is a variable gap knife coater for both flexible and rigid substrates. It is easy to set up and coats quickly.

The precision linear servomotors move the blade extremely smoothly, and the 4.5" thick granite plate uses a suction method to hold the substrate perfectly in place and level.



Coating Method	Knife-Over-Plate
Max. Coating Dimension	315 mm (12.4") x 400 mm (15.7")
Max. Substrate Dimension	315 mm (12.4") x 400 mm (15.7")
Dryer	N/A
Line Speed	0.3 to 3 mpm (0.98 to 9.8 fpm)

SPECIFICATIONS



Mini-Labo™

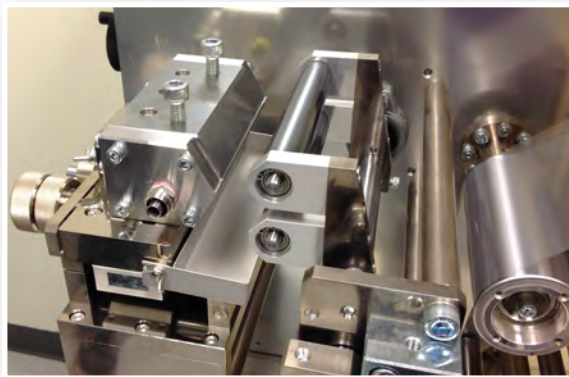
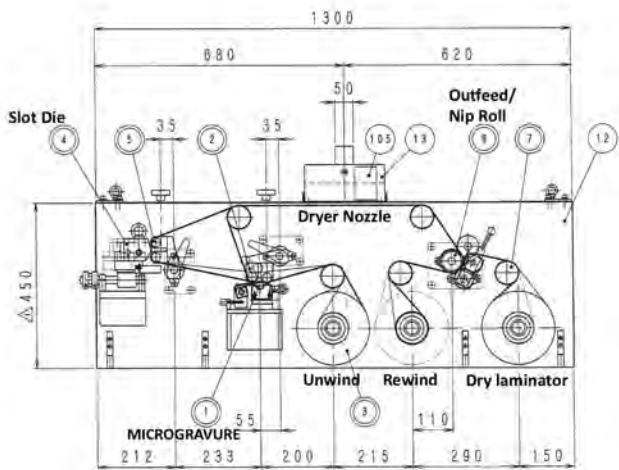
Tabletop R&D Coater

Yasui Seiki's smallest desktop unit is always ready for a demo! We keep stocks of this exact machine at our Bloomington branch, so if you love it, you can take one home with you. It's small but can help you achieve big results. This is the perfect machine to try if you are just starting with roll-to-roll coating.



SPECIFICATIONS

Coating Methods	MICROGRAVURE™, slot die
Max. Coating Width	320 mm (12.6")
Max. Web Width	330 mm (13")
Dryer	160° C (320° F), 0.2 m (8") long hot air open nozzle dryer
Line Speed	0.2 to 2 mpm (0.6 to 6.6 fpm)
Dry Laminator	Yes



Mini-Labo™ Deluxe

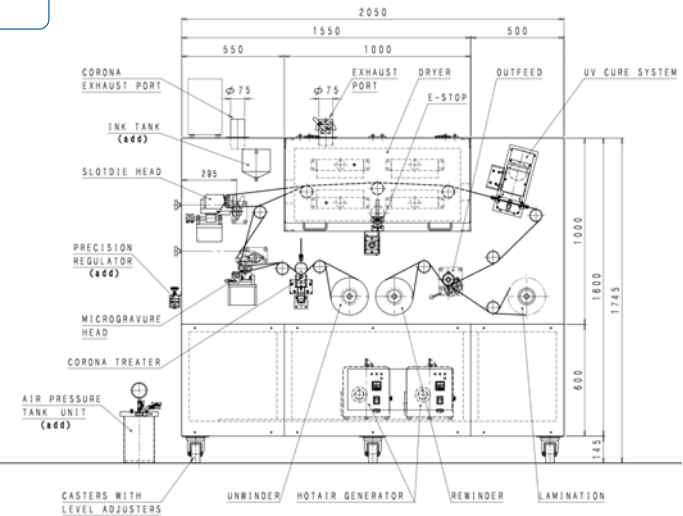
Lab Scale R&D Coater

Our customers' favorite machine is always available for a demo! Equipped with the most popular options, this versatile machine is cherished by big-name companies and small startups around the world. Come try it out, and if you love the results, we will build a custom unit just for you.



Coating Methods	MICROGRAVURE™, slot die
Max. Coating Width	320 mm (12.6")
Max. Web Width	330 mm (13")
Dryer	160° C (320° F), 1 m (3.3') long hot air oven
Line Speed	0.2 to 2 mpm (0.6 to 6.6 fpm)
Corona Treater	Ceramic Electrode
UV Cure	Yes
Dry Laminator	Yes

SPECIFICATIONS



Application Examples

Display

- Anti-Glare Film
- Anti-Reflection Film
- Diffusion Film
- Hard Coat Film
- Low Reflectivity Film
- Optically Clear Adhesives
- Transparent Conductive Film

Electronics

- Advanced 3D IC Packaging
- Barrier Film
- Dry Photoresist Film
- Low Temperature Co-fired Ceramic (LTCC)
- Multilayer Ceramic Capacitors (MLCC)
- Release Film

Energy Storage

- Li-Ion Battery Separator Film
- Electrode Coating
- Fuel Cell Casting & Coating
- Supercapacitor Casting & Coating
- Solid State Battery Casting & Coating

Labels & Food Packaging

- Adhesive Coating
- Barrier Film
- Pressure Sensitive Adhesives (PSA)

Medical & Pharmaceutical

- Antimicrobial Coating
- Diagnostic Strips
- Medical Patches
- Nanomedicine
- Thin Film Medicine
- Wearable Sensors

Photovoltaics Solar Cell

- Adhesive Promoting Layer
- Backsheets
- Organic Photovoltaic Solar Cell
- Perovskite Solar Cell

Water Filters

- Advanced Reverse Osmosis Membranes
- Graphene Membranes for Water Desalination
- Nano Biofilter Membranes

Window Film

- Anti-Glare Film
- Anti-Reflection Film
- Low Reflectivity Film
- Optically Clear Adhesives (OCA)
- Smart Windows

Other Applications

- 3D Holograms
- Inkjet Printer & Paper
- Decorative Film



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