

Laboratory R2R Coater – LR2RC

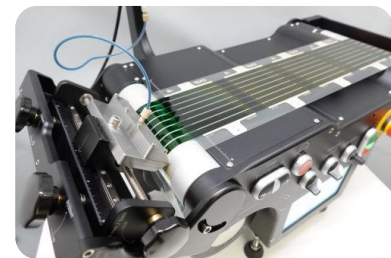
The Laboratory R2R Coater (LR2RC) is a compact high precision laboratory roll-to-roll coating machine that transforms the way thin functional films are printed and coated in 2021 and onwards.

With the LR2RC platform it is possible to create/build a system according to your needs. You can choose the length of the unit and have a wide selection of accessories that can be added. These count many different printing and coating units, several drying and curing systems, laminators, trimming and slitting knives, foil strippers, laminators, pumps, spindles, inspection systems, camera systems, testing systems, LBIC, solar simulator, registration and indexing units, barcode writers/readers and more. The fully equipped LR2RC unit will offer you a complete and turnkey system covering the range from laboratory to small pilot scale. Hundreds of meters of foil can be processed on these powerful machines offering you to scale with economy in mind.



All LR2RC base units come equipped with:

- Touch screen
- Buttons for unit operation
- Simple computer control
- Web tension control
- Spindles with adjustable conical bobbin holders
- Rollers in anodized aluminum



Build your LR2RC System:



LR2RC base length

The LR2RC is available in 4 different lengths from the very smallest LR2RC500 that measure only 500 mm in length and up to the LR2RC1500 that is 1500 mm long and allows drying lengths of 1250 mm.



Mounting system

The high precision angular mounting system is ideal for mounting a slot-die head, a knife coating set-up, a gravure or flexographic printing unit. The angle can be varied from 0 to 90 degrees (9 O'clock to 12 O'clock), which is very helpful during setup but also while coating.

Manual nip and laminator

Just before the rewriter the LR2RC has the possibility for a very flexible nip that is available in numerous configurations. The simplest has a full rubber roller with manual control of both nip pressure and tilt. Advanced versions include automation of nip engagement, nip pressure and pressure points. It can easily be used as a simple laminator and allows for very simple manual packaging of many devices with little work.

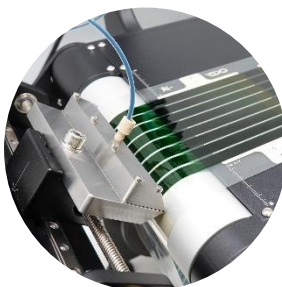


Oven Systems

A number of oven systems for curing your films can be added to the LR2RC systems. The oven systems are very simple to add, remove or replace in less than a minute and allows you to simply mount the desired curing system for the experiment or pilot run you are about to carry out. We have single system ovens for hot-air, inert gas, UV-curing or infrared (IR) curing. We also offer combinations of any two or all three of these curing types in our combo ovens.

Spindles

The LR2RC can be configured with three different spindle types. The standard comes equipped with adjustable cones allowing you to easily adjust the width, diameter, and position of your core. Sometimes your source foil or material may be supplied on a special diameter and this solution is very flexible and accepts core inner diameters from 35 mm up to 90 mm. An alternative is an air spindle that accepts 3-inch core inner diameters. This solution comes with manual air supply or automatic air supply.



Rollers

The rollers are a very essential part of your system and their mechanical and materials properties often define the outcome of your experiment. We thus care about rollers and all of our rollers have super low runout. Our standard anodized aluminium rollers are durable and cost efficient and will be the best choice for 95% of all applications. Even though the anodized rollers offer some electrical insulation some applications do require plastic roller and we do offer rollers in POM (black or white, for contrast) and PEEK (for extreme chemical resistance). We of course also offer rollers in stainless steel for extreme corrosion resistance.

Syringe pump

The LR2RC can be equipped with integrated syringe pumps that work together with the LR2RC unit and enable control over the pumping rate and the wet thickness of the applied ink. It is ideal for low viscosity inks and slot-die coating. Up to 4 pumps can be combined for advanced gradients and dilution experiments.

LR2RC Selection Guide

infiniPV laboratory roll-to-roll coating systems comprise a flexible platform that will meet all the needs from laboratory experimentation, through scale up to the lower end of pilot production. Hundreds of meters of foil can be processed on the LR2RC systems we offer.

	LR2RC500	LR2RC750	LR2RC1000	LR2RC1500
Length (mm)	500	750	1000	1500
Roller width (mm)	201	201	201	201
Web speed (0.2-2.7 m/min)	✓	✓	✓	✓
Web speed (0.4-5.8 m/min)	(✓)	(✓)	(✓)	(✓)
Possible number of ovens	1	2	3	5
Unwinder/rewinder mode (clockwise)	✓	✓	✓	✓
Unwinder/rewinder mode (clockwise and counterclockwise)		(✓)	(✓)	(✓)
Adjustable conical core holder	✓	✓	✓	✓
Manual compressed air spindles	(✓)	(✓)	(✓)	(✓)
Automatic compressed air spindles	(✓)	(✓)	(✓)	(✓)
Manual nip and laminator	(✓)	(✓)	(✓)	(✓)
Slot-die mount (0-90 degrees, 9 O'clock to 12 O'clock)	(✓)	(✓)	(✓)	(✓)
Syringe pump power plug	(✓)	(✓)	(✓)	(✓)
Pump holder	(✓)	(✓)	(✓)	(✓)
IR oven	(✓)	(✓)	(✓)	(✓)
Optical inspection table		(✓)	(✓)	(✓)
UV curing station	(✓)	(✓)	(✓)	(✓)
Inert gas oven	(✓)	(✓)	(✓)	(✓)
Combo oven	(✓)	(✓)	(✓)	(✓)

Single phase (240VAC/16A) operation	✓	✓	✓	✓
3-phase (400VAC/16A) operation			(✓)	(✓)
Anodized precision rollers	✓	✓	✓	✓
POM rollers (black or white)	(✓)	(✓)	(✓)	(✓)
PEEK rollers	(✓)	(✓)	(✓)	(✓)
Stainless steel rollers	(✓)	(✓)	(✓)	(✓)

Elements in brackets are obtainable as extra options!