Adphos R2R (Roll-to-Roll) Transport Systems are a family of table top laboratory and pilot production transports for testing and validation of drying, curing and sintering applications for a multitude of inkjet technologies.

Lab Testing to Full Production - Lab to Fab

Moving from printed electronics concepts in the lab to full production can involve great risks of manufacturability. Products that are currently produced on an x-y machine can now be evaluated on a low cost, high speed transport to simulate your actual production process.

Maximum Adaptability

R2R Systems provide an open interface to various inkjet heads including: FUJIFILM Dimatix, Hewlett Packard, Kyocera, and Konica Minolta.

A large selection of adphosNIR® drying, curing and sintering equipment is available for integration with all models of the R2R—from high performance adphosNIR® combined with hot air for drying applications to focused reflectors for high density, short duration photonic processing (sintering/annealing). Please consult Adphos for different options appropriate to your application.

Specifications for Roll-to-Roll System:

- **Web width:**
  - Standard (base) 45mm (1.75”)
  - Option A 75mm (3”)
  - Option B 120mm (4.25”) (120mm)
  - Option C 6” (160mm)

- **Speed:**
  - Standard up to 100 ft/min
  - Option 1 up to 300 ft/min (100m/min)
  - Option 2 up to 500 ft/min (150m/min)

- **Power supply/control**
  - Integrated
  - Small PLC
  - Potentiometer for speed adjustment
  - Power infeed for up to 10 kVA (Base), larger on request as option

- **Adapted the R2R-system as desktop table device**

- **Optional Processing Modules**
  - Water-cooled chill roller
  - Mounting provisions for third-party drying/curing modules (UV, pulsed xenon, convection, etc)
  - Flexographic, slot die or other printing systems
  - Non-contacting temperature measurement systems
  - Other custom integrations available upon request
adphosNIR® is not just another IR-Technology

Ultra short wave length energy (T > 3,000 – 3,500°K)

Very high energy density up to 1,000 KW/m² (93 KW/ft²), ultimate 1,500 KW/m² (140 KW/ft²)

Highly focused reflector geometry

Many commercially available films are nearly transparent to adphos-NIR® energy

adphosNIR®, preferentially heats ink while minimizing direct heating of film or paper