

Conveyor Curing

UV Curing Solutions



Since 1960 American Ultraviolet has brought superior ultraviolet conveyor curing technology, and customer service, to screen and digital printers who have discovered that UV saves money in many ways, including:

- UV dryers take up less space, so shops can utilize more revenue-producing equipment
- UV uses less energy, therefore significantly cutting operating costs
- UV ink goes farther than solvent-based ink (up to 60 percent per gallon)
- UV curing can increase throughput four times over solvent-based processes
- Clean-up time practically disappears, adding to the time available for production
- UV technology doesn't pollute, inside or outside the shop, which means healthier employees, and a healthier, "greener" environment

The Lesco division of American Ultraviolet also provides curing equipment, including conveyor, rotary, bottle and flood lamp curing equipment that is environmentally responsible and economically rewarding.

UV curing instantly solidifies coatings, inks, and adhesives with a cool, clean beam of light. Volatile Organic Compounds (VOC) found in the noxious, flammable solvents used by conventional coatings, adhesives and inks are completely eliminated. The ultraviolet curing process is a photochemical reaction where free flowing molecules, excited by UV radiation, link to form solid polymer chains. Small amounts of chemicals known as "Photoinitiators" act as catalysts, allowing the UV-curable adhesives & coatings to remain liquid, then instantly solidify or "cure" the material the split second UV light hits them.

UV curing involves 100 percent solids in a fluid state, with no hazardous substances released during the cure process. The environmental benefit: the amount of liquid applied before the curing process is the same amount remaining after the curing is complete - no leftovers; no VOC emissions; no compliance problems.



**American
Ultraviolet®**



Mini-Curing System

The Mini Conveyor UV Cure System is the workhorse for small production pieces and cures substrates up to six inches wide. The Mini Conveyor provides intense ultraviolet energy that's ideal for:

- Curing ultraviolet paints, inks and coatings
- Photoactivation of UV-sensitive adhesives
- Color matching

The Mini Conveyor is available in a standard three-foot length or the extended 54-inch with additional conveyor areas for infeed and outfeed.



Standard features

- 2-100 FPM variable speed control with FPM indicator
- 6"-wide, UV-resistant coated fiberglass belt
- Vacuum hold-down
- 6', 300 W/inch curing lamp
- 120 Volts/60 Hz/20 Amps
- Tri-power lamp switching

Optional features

- Metal halide system (iron, mercury or gallium lamp)
- 400 W/inch
- Parallel lamp configurations

3-Foot Conveyor

American Ultraviolet's "3-Foot" curing system incorporates the latest technology in a compact-size variable-speed conveyor that takes up minimal shop space, making it ideal for laboratory samples, color matching and production applications.

The "3-Foot" Conveyor has a 300 W/inch mercury lamp with tri-power switching and an optional 400 watt iron additive lamp. This variable-speed conveyor features digital feet per minute indicator, UV-resistant coated fiberglass conveyor belt, secondary ammeter and vacuum/exhaust hold-down.



Standard features

- Length: 3', width: 36"
- Conveyor height: 29-40"
- 10-160 FPM variable speed with FPM indicator
- 300 W/inch mercury lamp
- Tri-power lamp switching
- 6, 12 and 18" model sizes
- Digital FPM Indicator

Conveyor

C Series with microwave UV light sources

The C Series of UV conveyors made by our Lesco division include the C636, C612 and C2000. All feature electrodeless light sources with power ratings of 300 and 600/400 W/inch. Also available are light sources with three different UV spectral outputs to exactly match the curing requirements of the selected UV chemistry. These industrial grade UV curing systems are built to withstand around the clock production cycles and designed to meet the rigorous demands of commercial applications..

C636

Standard features

- 6" cure width
- 1 or 2 rows of lamps
- 6" microwave bulb @ 300 W/inch
- .5-100 fpm variable belt speed
- 0-4" lamp focus adjustment
- 2" height clearance

C612

Standard features

- 6, 10 and 12" cure widths
- 1 or 2 rows of lamps
- 6" or 10" microwave bulb @ 300, 400 or 600 W/inch
- .5-100 fpm variable belt speed
- 0-4" lamp focus adjustment
- 2" height clearance

C2000

Standard features

- 10-40" cure widths
- 2 rows of lamps
- 6" or 10" microwave bulb @ 300, 400 or 600 W/inch
- .5-100 fpm variable belt speed
- 0-4" lamp focus adjustment
- 2" height clearance

Optional features for C series models

- 2 to 6" special shielding
- Higher speeds available



Curing

Standard Conveyors

American Ultraviolet's standard UV curing conveyors are anything but standard. And more and more screen printers are discovering the benefits of our systems, including space, energy and ink savings, quadrupled throughput, greatly reduced cleanup, a healthier environment and healthier employees.

In addition to the 3-foot conveyor (see Page 2), which uses minimal shop space, making it ideal for laboratory samples, color matching and production applications, American Ultraviolet offers a standard 6-foot conveyor that is ideal for applications less than 30" and a 10-foot conveyor that is perfect for wider cure widths that require larger lay down room.

Standard features

- Adjustable height
- Tri-power switching
- Variable belt speed
- Air-cooled lamp assembly
- UV-resistant coated fiberglass belt
- Vacuum hold down exhaust hopper
- Single or double lamp
- 300 or 400 W/inch
- Metal halide lamps



6 Foot Conveyor
(6, 12 and 18" cure widths)



10 Foot Conveyor
(30, 38, 48, 60 and 80" cure widths)

Conveyor

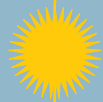
Super Cool

The state-of-the-art "Super Cool" conveyor curing system maintains substrate temperatures at or below 98 degrees Fahrenheit.* All systems are elliptically focused and incorporate replaceable reflector liners in heat sink extrusion. Each lamp assembly utilizes steel-bladed cooling fans and high-voltage key-locked connectors. The exhaust/vacuum system, lamp evacuation airflow design and infrared filters insure low operating temperatures for heat-sensitive substrates.

Standard features

- Single-, double- and triple-lamp configuration
- Individually controlled lamps operate at 300, 200 or 125 W/inch
- Additive lamps operate at 400 W/inch
- 13'-20' conveyor lengths
- 5 to 160 FPM variable speed

*Based on ambient air temperature of 72°F, belt speed at 60 FPM and lamps at 200 WPI.



"You may recall sitting with me and coming up with not 1, nor 2, but 3 Super-Cool units with dual metal halide lamps we initially purchased from American Ultraviolet. Since then we've purchased 2 additional units and are just as happy with the way they are performing. An area we are particularly pleased with is the surface temperature of our substrates. We're amazed at how cool we can keep these surfaces while maintaining proper cure during high-speed production runs."

Regards,
Blaine MacMillan, President
Cowan Graphics, Inc.



Curing

Optima Conveyors

The low-cost, reliable, CE-approved Optima curing conveyors may not include popular high-end features found on other American Ultraviolet curing conveyors, but they're optimal for curing POP material, and for curing UV coatings on flat, lightweight wood sheets. Important add-ons include a hinged, quick-change lamp assembly cover and modular frame rails for simplified installation.

Standard features

- 32, 60 and 80" cure widths
- 5-160 FPM variable speed belt
- Single, optically focused lamp assembly
- Vacuum hold-down
- Dual power levels



Multicure

The Multicure UV conveyor system from Lesco UV is designed to cure very heat sensitive substrates that require large dosages of ultraviolet energy to cross link the UV chemistry. A proven solution for UV conformal coating of heat sensitive circuit boards, the Multicure is also ideal for silicone potting; sealing and gasketing; medical, ophthalmic and orthodontic plastic bonding and sealing; and thin film/sensitive substrates. With the ability to edge handle PCBs and provide digital speed readout, the Multicure can be integrated into an existing production line.

Standard features

- Choice of microwave electrodeless or conventional mercury arc lamps
- Variable belt speed
- Vacuum hold down
- Adjustable lamp height
- Shelf for power supplies
- 2-25 fpm variable belt speed
- Belt or edge handling configurations
- 4" height part clearance
- Cure width starting at 18"



Conveyor

Spinster

The energy-efficient Spinster UV Bottle Curing system instantly cures inks and coatings on all sides of round, square, hex, oval or tapered bottles of various shapes, materials and sizes from 1/4 oz. to 1 gallon and 12-1/8" tall x 6" diameter. A unique, and patented, rotational conveyor and reflector design placement ensures complete 360° curing. The Spinster can be easily moved anywhere it's needed in the shop, requires only 15 sq. ft. of floor space, and can take the punishment of around the clock production requirements. UV curable inks and coatings can be applied to plastic, metal or glass containers.

Standard features

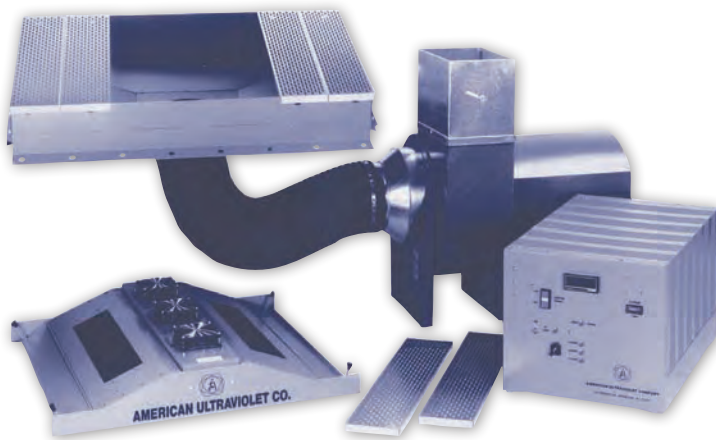
- Variable speed curing capacity
- On/off and rotational speed controls
- 6 or 10" microwave lamp; or 6 or 12" arc lamp
- Internal reflectors for a 360° cure
- Patented technology
- 400 W/inch metal halide lamp available



Retrofit "add-on" Air-cooled Conveyor Systems

Adding ultraviolet curing to existing gas, electric or infrared conveyors is easy with American Ultraviolet irradiators, lamps and power supplies. Custom-designed exhaust/vacuum systems install below the belt, while the curing system installs on top.

The retrofit kit includes a labeled, digital, encased power supply; a focused, air-cooled lamp assembly; optical shielding; and an optional vacuum/exhaust hold-down with blower — everything you need to convert an existing dryer to air-cooled UV in order to cure UV inks, coatings and adhesives.



Standard features

- Extruded aluminum, elliptically focused reflector
- Replaceable polished aluminum reflector liners
- Completely wired power supply with lamp intensity controls
- Tri-power lamp switching (300, 200, 125 W/inch)
- Custom air seals to prevent lamp overcooling

Curing

American Ultraviolet

For the best source of standard and custom UV curing systems, no one outshines American Ultraviolet. We've focused exclusively on UV since 1960. We've invested in the research and development necessary to stay at the forefront of the industry. We offer the highest quality products at competitive prices. And we back all of our systems with superior technical support and customer service.

American Ultraviolet is comprised of three operating divisions:

- **UV systems and components**

American Ultraviolet manufactures UV systems and components, including additive lamps, to primarily cure inks and coatings for a wide variety of applications, including screen and digital printing and wood processing.

- **Advanced UV integrated curing systems**

Aetek UV Systems provides advanced UV integrated curing systems for the narrow-web, industrial, and large-web shutter industries.

- **High-intensity UV spot-curing systems**

Lesco specializes in high-intensity UV spot-curing systems that bond substrates together using UV-curable adhesives for markets that include aerospace, electronics and medical devices, among others.

So, the next time you're in the market for curing equipment, give us a call, or visit us on-line. We're confident it won't take you long to realize that there's no better source of UV under the sun than American Ultraviolet.

Conveyor | Spot | Shuttered | Handheld | Surface | Specialty | Custom



**American
Ultraviolet®**

Since 1960. It's all we do.

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Aetek UV Systems

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LIGHTWAVE ENERGY SYSTEMS CO., INC.