SA SYSTEMATIC AUTOMATION INC.

Ultra Light™
Advanced Ultraviolet System

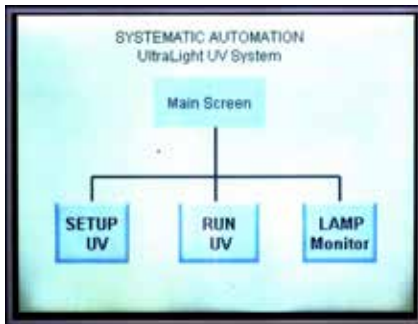# FOR CURING INKS, ADHESIVES AND COATINGS

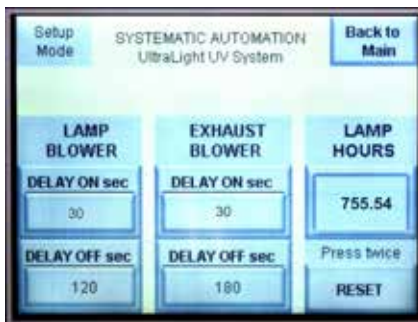# 400 WATTS PER INCH OF UV POWER FOR EFFICIENCY AND SPEED

EASY TO USE VERSATILE CONTROL

Touch Screen Control Panel

- **Mounts anywhere on your conveyor, machine or system.**
- **Quick disconnect cable in standard 10 foot (300 cm) length.**
- **One panel individually controls and monitors up to 10 power supplies.**
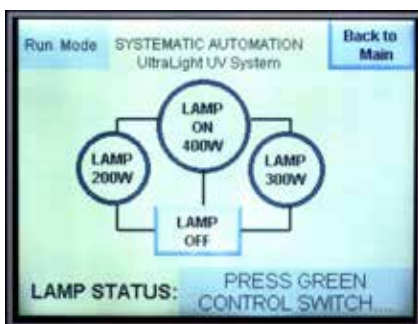- **Available in other languages.**

MAIN OPERATIONAL SCREEN

- **All the functions of the *Ultra Light*™ system are accessed from the touch screen control panel.**

- **The system consists of three modes of operation: Setup, Run and Monitor. Each mode is simply chosen by a touch of a button on the main screen.**

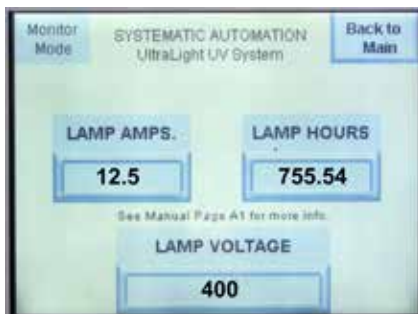- **The operator can switch between all modes even when the UV is in operation.**

SETUP MODE SCREEN

- **Setup mode is a password protected screen that allows the operator to set the delay on/off time of the blower. Multiple blowers may be configured in a system.**

- **The total operational hours of the lamp is displayed in a message box. The operator resets this hour meter reading when a new lamp is installed in the system.**

RUN MODE SCREEN

- **Different lamp power settings (200/300/400 WPI) are chosen by a simple touch of the screen.**

- **Status of the UV lamp as well as step by step instructions for the UV system are displayed in the message box at the lower right section of the screen. This straight forward and intuitive approach allows a novice operator to operate the *Ultra Light*™ system easily.**
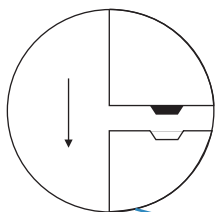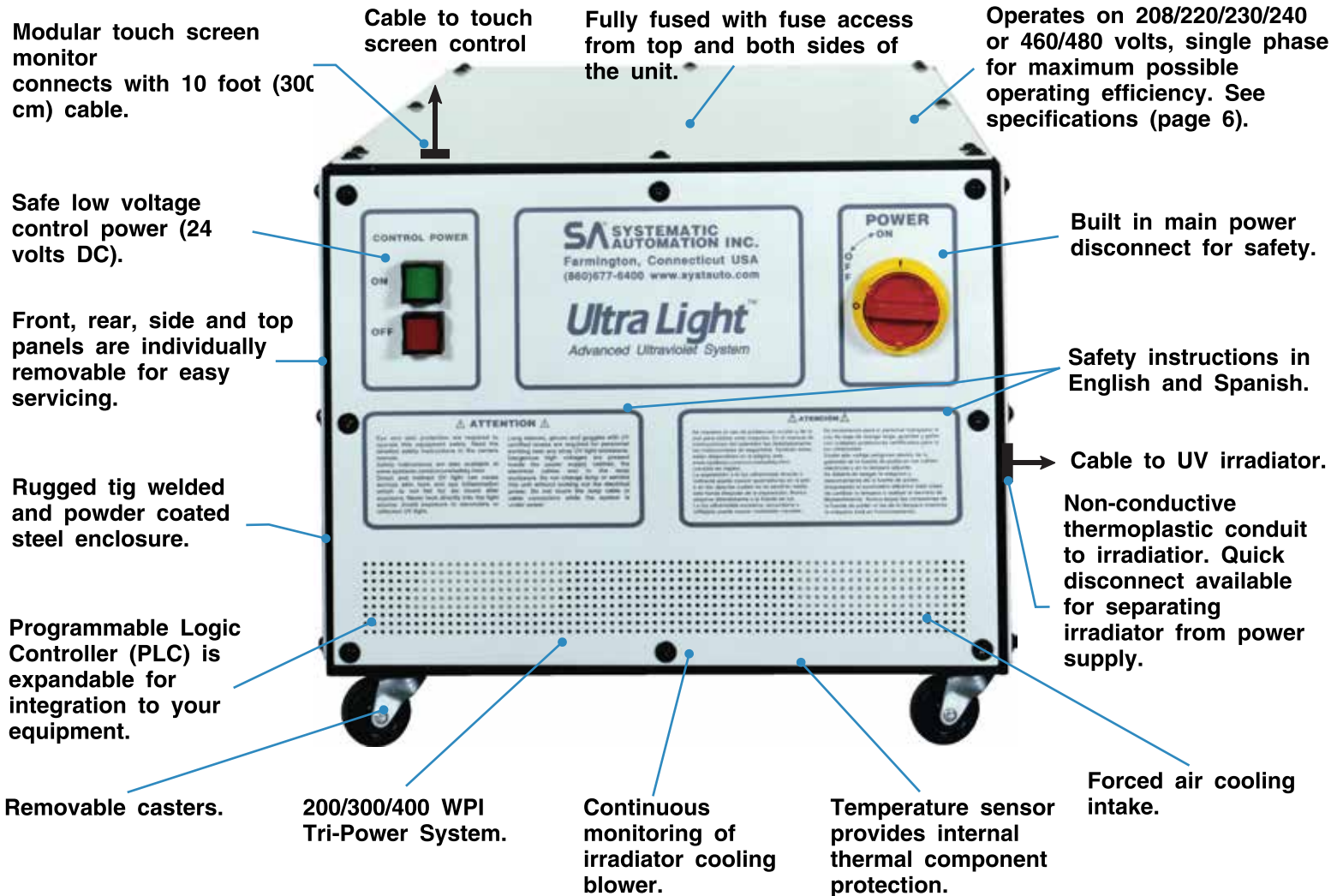

MONITOR MODE SCREEN

- **Condition of the UV lamp, lamp current and total lamp operation hours are displayed on the monitor mode screen.**
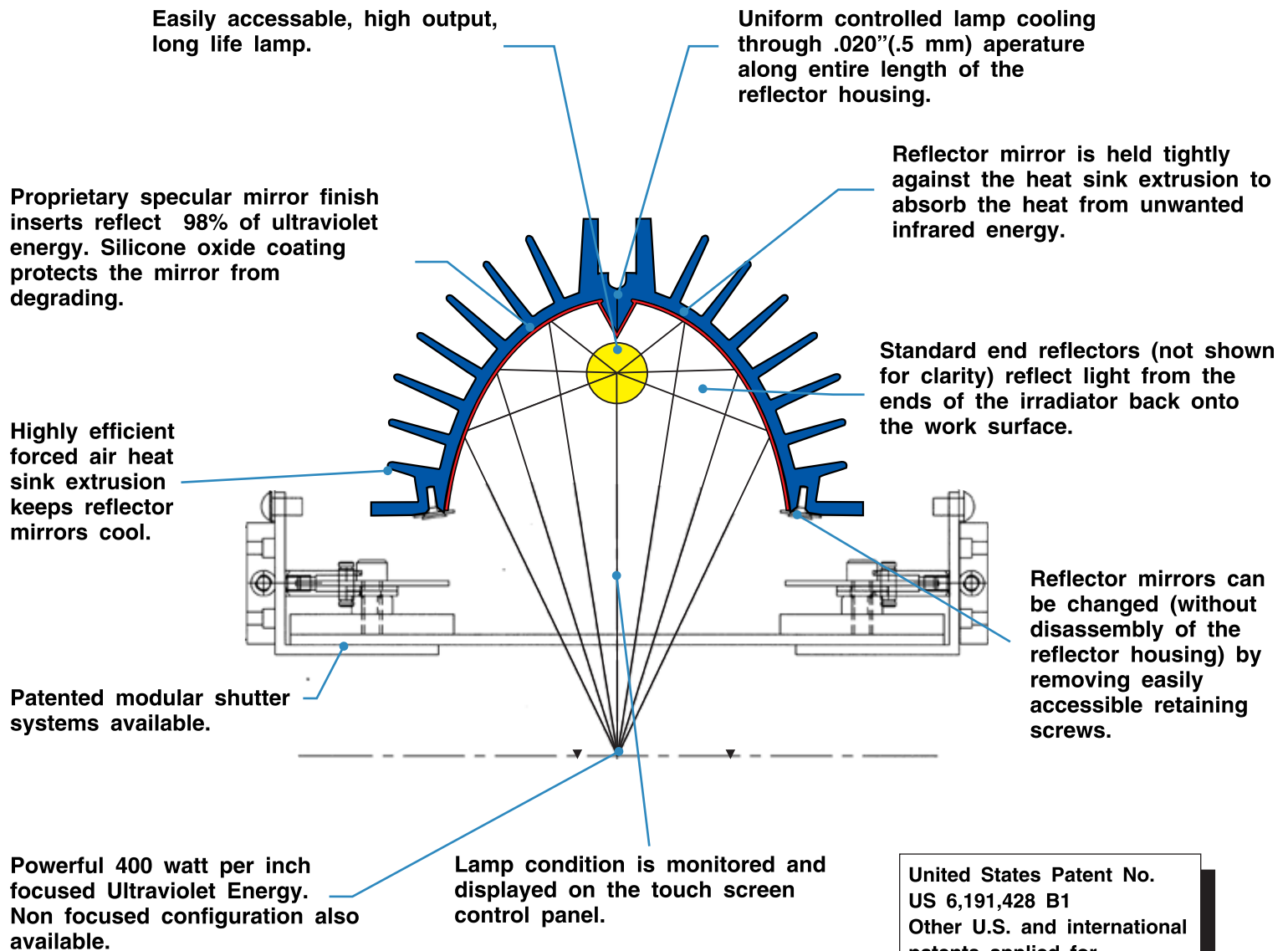
It just can't get any simpler!

RUGGED AND RELIABLE 400 WPI POWER SUPPLY UNIT

Modular touch screen monitor connects with 10 foot (300 cm) cable.

Cable to touch screen control

Fully fused with fuse access from top and both sides of the unit.

Operates on 208/220/230/240 or 460/480 volts, single phase for maximum possible operating efficiency. See specifications (page 6).

Safe low voltage control power (24 volts DC).

Built in main power disconnect for safety.

Front, rear, side and top panels are individually removable for easy servicing.

Safety instructions in English and Spanish.

Cable to UV irradiator.

Rugged tig welded and powder coated steel enclosure.

Non-conductive thermoplastic conduit to irradiatior. Quick disconnect available for separating irradiator from power supply.

Programmable Logic Controller (PLC) is expandable for integration to your equipment.

Removable casters.

200/300/400 WPI Tri-Power System.

Continuous monitoring of irradiator cooling blower.

Temperature sensor provides internal thermal component protection.
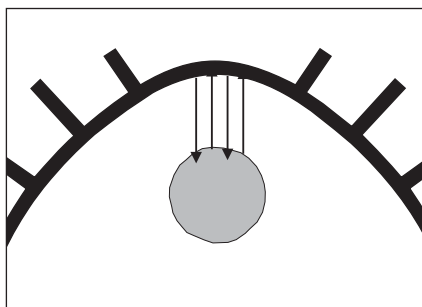
Forced air cooling intake.

Power supplies are stackable. One touch screen control panel can individually operate up to 10 power supply units.
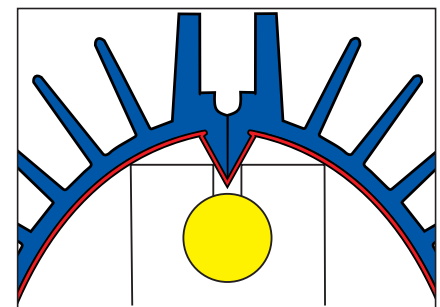
REVOLUTIONARY IRRADIATOR DESIGN

Easily accessable, high output, long life lamp.

Uniform controlled lamp cooling through .020"(.5 mm) aperature along entire length of the reflector housing.

Reflector mirror is held tightly against the heat sink extrusion to absorb the heat from unwanted infrared energy.

Proprietary specular mirror finish inserts reflect 98% of ultraviolet energy. Silicone oxide coating protects the mirror from degrading.

Standard end reflectors (not shown for clarity) reflect light from the ends of the irradiator back onto the work surface.

Highly efficient forced air heat sink extrusion keeps reflector mirrors cool.

Reflector mirrors can be changed (without disassembly of the reflector housing) by removing easily accessible retaining screws.

Patented modular shutter systems available.

Powerful 400 watt per inch focused Ultraviolet Energy. Non focused configuration also available.

Lamp condition is monitored and displayed on the touch screen control panel.

United States Patent No. US 6,191,428 B1 Other U.S. and international patents applied for.

Conventional Reflector

Conventional reflectors lose up to 20% of their energy to heat from light reflected toward the lamp. The *Ultra Light*™ system directs this light to the reflector and to the work surface, not back through the lamp. This design provides the maximum possible energy efficiency.
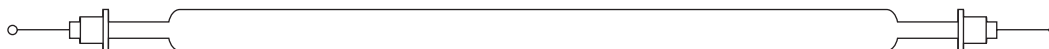
Ultra Light™ **Reflector**

20% UV energy loss

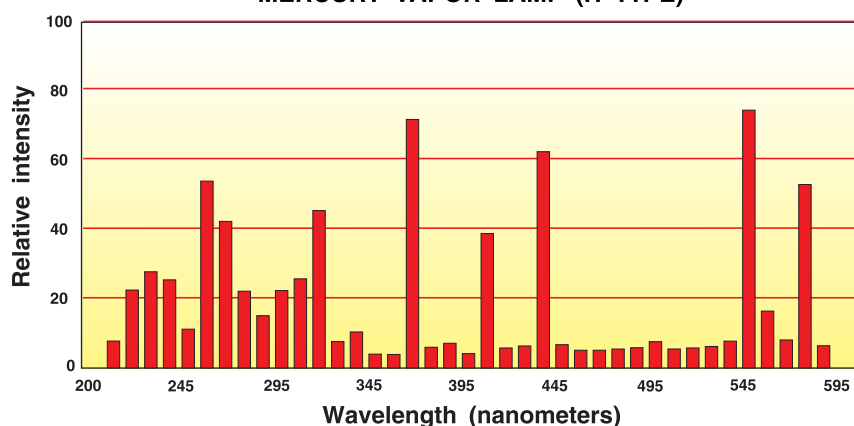MAXIMUM EFFICIENCY

INDUSTRY STANDARD LAMPS

In stock for immediate delivery
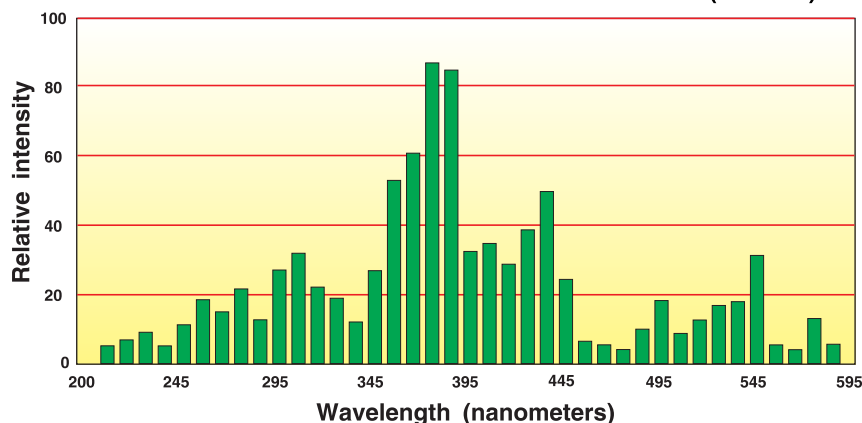
400 Watts Per Inch UV power <u>and</u> versatility

The *Ultra Light*™ system allows you to use different lamp types, each with its own unique UV spectral output. Short wave UV is absorbed at the surface of the material being cured while long wave UV penetrates deeper. The photoinitiator is the component in UV curable materials that absorbs the UV light causing the material to cure. Effective curing is achieved by matching the spectral output of the lamp to that required by your formulation and film thickness. Our knowledgable staff can recommend the best lamp type for your application.
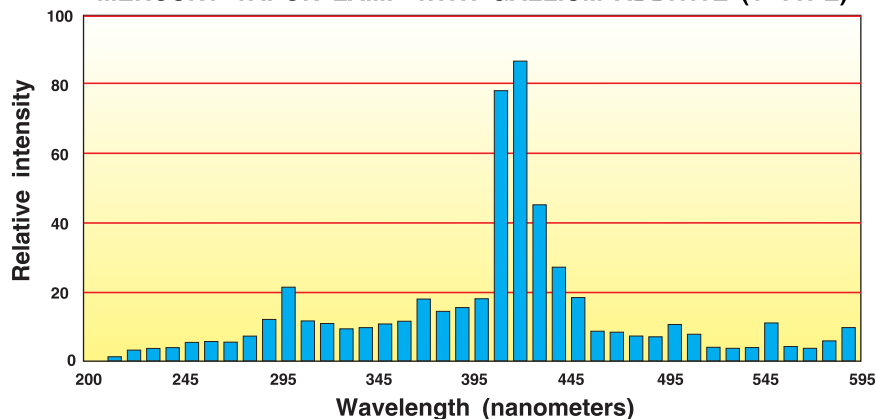
MERCURY VAPOR LAMP (H TYPE)

The mercury lamp has a strong output in the short wave UV range between 220 and 320 nm (nanometers) and a spike of energy in the longwave range at 365 nm. The H lamp is a good choice for clear coatings and thin ink layers and produces hard surface cures and high gloss finishes.

MERCURY VAPOR LAMP WITH IRON ADDITIVE (D TYPE)

The addition of iron to the lamp yields a strong output in the longwave range between 350 and 400 nm while the mercury component maintains good output in the short wavelength range. The D lamp is a good choice for curing heavily pigmented inks, adhesives, and thick laydowns of clear materials.

MERCURY VAPOR LAMP WITH GALLIUM ADDITIVE (V TYPE)

The addition of gallium to the lamp yields a strong output in the longwave range between 400 and 450 nm. This makes the V lamp a good choice for curing white pigmented inks and base coats containing titanium dioxide which blocks most shortwave UV.

Call (860) 677-6400 for technical assistance

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SPECIFICATIONS

Lamp Arc Length	Lamp Options	Lamp Output	Cooling	Operator Interface	Voltage	Amperage based on 208/460 Volts 60 Hertz	Irradiator Dimensions HxWxD	Power Supply Dimensions HxWxD	Shipping Weight (Approx.)
6" 152mm	H Type D Type V Type (see page 5)	400 watts per inch	Forced Air	(touch screen optional)	208 220/240 460/480 60hz*	20/10 A	6"x8"x17" 152x203 x432mm	15"x20"x20" 381x508 x813mm	250 lbs. 113 kg.
12" 304mm	H Type D Type V Type (see page 5)	400/300/200 watts per inch	Forced Air	Touch Screen	208 220/240 460/480 60hz*	30/15 A	6"x8"x23" 152x203 x584mm	15"x20"x20" 381x508 x813mm	375 lbs. 170 kg.
18" 451mm	H Type D Type V Type (see page 5)	400/300/200 watts per inch	Forced Air	Touch Screen	208 220/240 460/480 60hz*	42/25 A	6"x8"x29" 152x203 x736mm	15"x20"x32" 381x508 x813mm	425 lbs. 192 kg.
25" 635mm	H Type D Type V Type (see page 5)	400/300/200 watts per inch	Forced Air	Touch Screen	208 220/240 460/480 60hz*	60/30 A	6"x8"x36" 152x203 x914mm	15"x20"x32" 381x508 x813mm	450 lbs. 204 kg.
30" 762mm	H Type D Type V Type (see page 5)	400/300/200 watts per inch	Forced Air	Touch Screen	208 220/240 460/480 60hz*	75/35 A	6"x8"x41" 152x203 x1041	30"x20"x32" 762x508 x813mm	500 lbs. 226 kg.
38" 965mm	H Type D Type * V Type * (see page 5)	400/300/200 watts per inch	Forced Air	Touch Screen	208 220/240 460/480 60hz*	90/45 A	6"x8"x49" 152x203 x1244mm	30"x20"x32" 762x508 x813mm	525 lbs. 238 kg.
48" 1219mm	H Type D Type * V Type * (see page 5)	400/300/200 watts per inch	Forced Air	Touch Screen	208 220/240 460/480 60hz*	120/55 A	6"x8"x59" 152x203 x1498mm	30"x20"x32" 762x508 x813mm	575 lbs. 260 kg.
Sizes up to 70" 1778mm available	H Type D Type * V Type * (see page 5)	400/300/200 watts per inch	Forced Air	Touch Screen	Consult factory	Consult factory	Consult factory	Consult factory	Consult factory

*60hz is standard, 50hz is optional

*60hz systems in Lamp Arc length 36" to 44" and 72" to 88" are only available with H type lamps

*50hz systems in Lamp Arc length 46" to 54" and 92" to 108" are only available with H type lamps
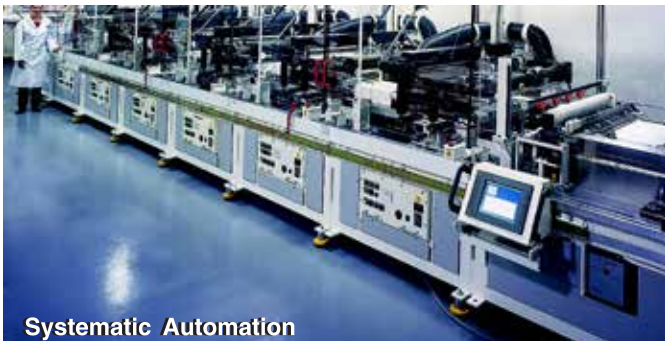
STANDARD ACCESSORIES

**Dozens of standard systems for curing flat,
3 dimensional and cylindrical items are available**

CONVEYORIZED SYSTEMS FOR FLAT AND 3 DIMENSIONAL PRODUCTS.

SPIN CURES FOR CYLINDRICAL AND IRREGULAR SHAPED PRODUCTS.

United States Patent No. US US 6,397,491 B1

SHUTTERED UV SYSTEMS FOR AUTOMATED PRODUCTION LINES

United States Patent No. US 6,230,876 B1

Systematic Automation
multicolor UV press shown

Whatever your application, we can provide the right solution. Call for application assistance on our full line of UV equipment.

Call (860) 677-6400 for technical assistance

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We are located in central Connecticut, 30 minutes from Bradley International Airport and 2 hours from New York City or Boston

HEADQUARTERS AND MANUFACTURING FACILITY

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