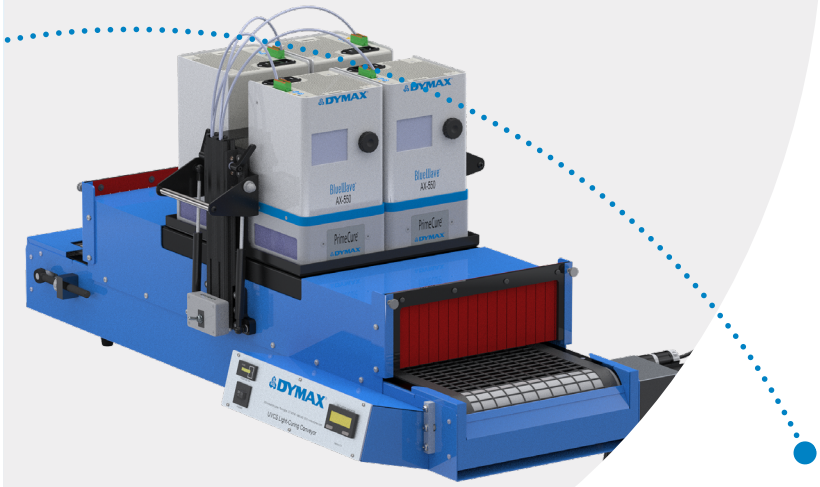


UVCS LED Conveyor System

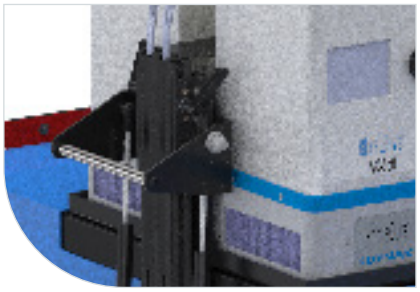
12"-Wide Curing with BlueWave® AX-550 V2.0 LED Flood Lamps

- Complete UV shielding
- Controlled and consistent cure times
- 4.5", 6.5", or 10.5" vertical clearance available
- 12" belt width (guides available to channel parts into center 6"
- BlueWave AX-550 V2.0 LED emitters available in 365, 385, and 405 nm wavelengths
- Built-in exhaust fans with optional circular duct adapter
- Adjustable array-to-belt distance
- Bench-top conveyor (with optional transportation carrying cart)

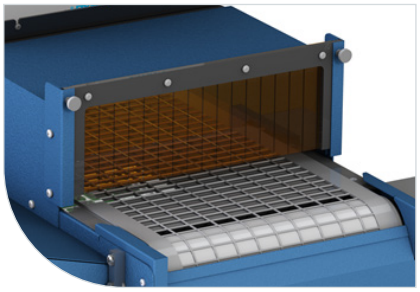
Dymax UVCS bench-top conveyor systems are designed for fast curing of adhesives, coatings, and inks that react in the UVA and/or visible spectral ranges. The conveyors can be outfitted with one of three different wavelength BlueWave AX-550 V2.0 LED flood lamps (365 nm, 385 nm, or 405 nm) and can accommodate up to four emitters. If two emitters are used, they can be mounted side-by-side or front-to-back for additional process flexibility. All UVCS conveyors have adjustable belt speeds of 1 to 32 fpm, as well as adjustable lamp-to-belt distance to address a variety of application requirements. When combined, the UVCS conveyors' consistent intensity, fast curing, and adjustable line speeds create an optimized LED light-curing process that enables high throughput.

System Features

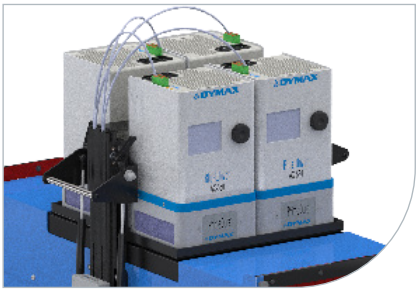
- Complete shielding from light
- Controlled and consistent cure times
- Maximum parts height of 4.50" [10.8 cm]
- 1.5" minimum height with 4", 6", or 10" vertical clearance available
- 12" belt width (guides available to channel parts into center 6"
- BlueWave® AX-550 V2.0 LED emitters available in 365, 385, and 405 nm wavelengths
- Built-in exhaust fans with optional circular duct adapter
- Counterbalanced height adjustment mechanisms for ease of emitter-to-belt distance adjustments
- Accurate digital belt speed control and readout
- Bench-top conveyor (with optional transportation carrying cart)
- Greener technology – no ozone generation, mercury-free, environmentally friendly LED emitters consume less energy than conventional UV curing lamps
- Innovative, all-in-one lamp design saves space, eliminates cabling and no need to mount a separate controller in the cabinet.



Lamp Height Control



12" Belt Width



Compatible with up to Four Emitters

LED vs. Broad-Spectrum Systems

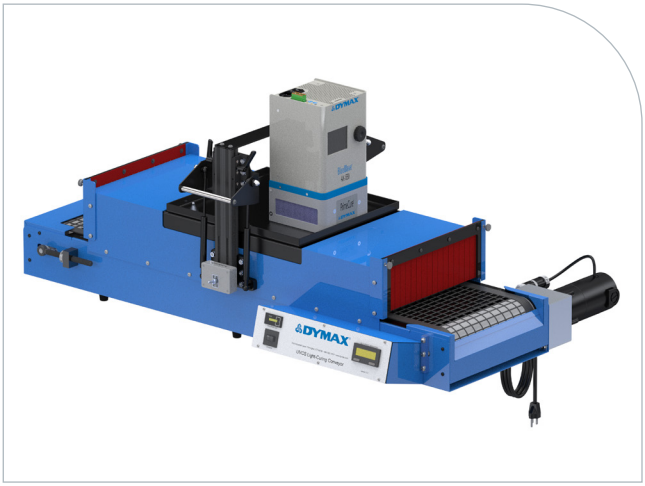
Dymax LED-curing systems using BlueWave AX-550 V2.0 emitters offer many advantages over conventional broad-spectrum systems, including:

- Cooler curing for temperature-sensitive substrates. Conventional broad-spectrum lamps operate and emit energy at high temperatures, which can damage sensitive substrates or force you to make multiple passes to deliver the curing energy needed for an application.
- Large 5" x 5" curing area. Most broad-spectrum systems offer a much smaller cure area. Parts get a higher dosage with our larger cure area but with cooler cures you don't risk damage to your parts.
- Better uniformity across the cure area assures more consistent cure results.

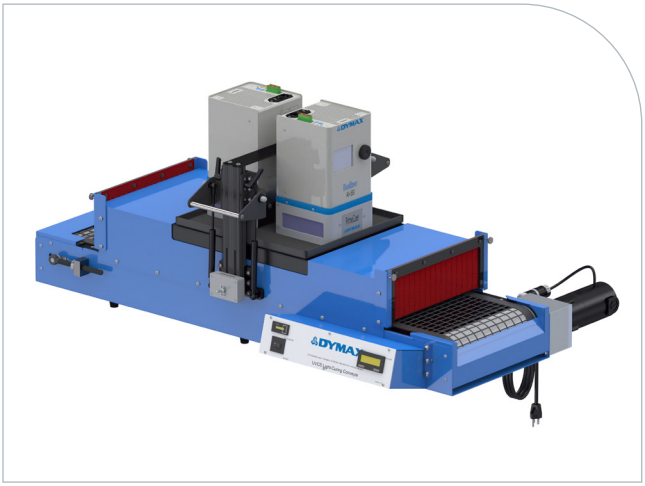
If you're currently curing one of our LED-optimized adhesives with a broad-spectrum lamp, our BlueWave® AX-550 V2.0 LED flood emitters may also properly cure your adhesive. Visit www.dymax.com for a complete listing of Dymax LED-optimized adhesives. In addition to our LED-optimized adhesives, many of our other adhesives also cure properly with the BlueWave AX-550 V2.0 LED flood. Our Application Engineering group is available to help evaluate your adhesive application to see how LED-curing technology may be successfully incorporated into your current or future application needs.

BlueWave AX-550 V2.0 LED Flood Emitters

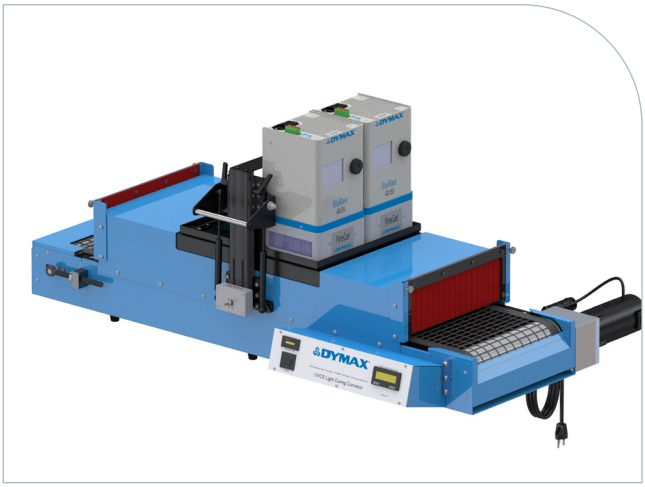
UVCS-series conveyors can be outfitted with one, two, or four BlueWave AX-550 V2.0 LED flood emitters. If two emitters are used, they can be either center mounted (CM) or mounted full width (FW) as shown in the diagrams below. BlueWave AX-550 V2.0 LED flood emitters provide high-intensity curing energy over a 5" x 5" (12.7 cm x 12.7 cm) curing area. 365 nm, 385 nm, and 405 nm wavelength configurations are available. The selection of the correct wavelength emitter will depend on the material being used and other application requirements. Contact Dymax Application Engineering for more information on optimizing your adhesive and curing equipment.



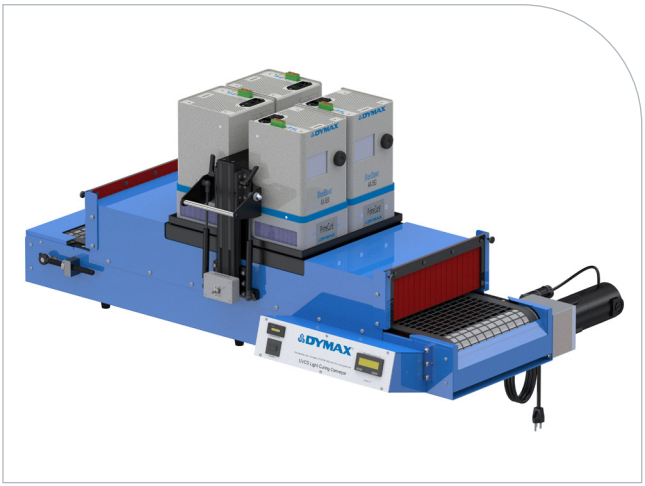
One Emitter, Center-Mounted, 5" Wide Single Exposure



Two Emitters, Mounted Front-to-Back, 5" Wide Double Exposure



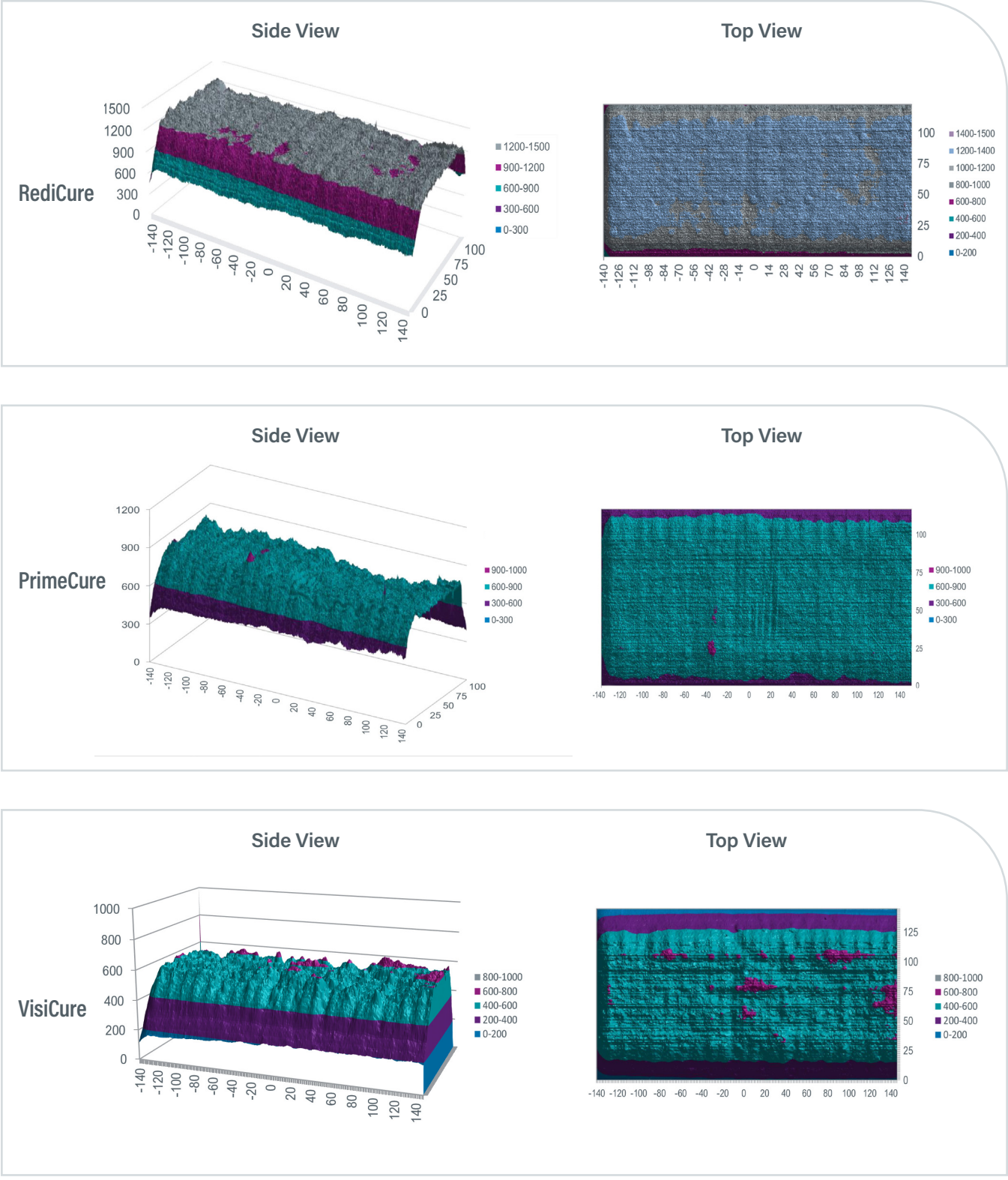
Two Emitters, Mounted Side-by-Side, 10" Wide Single Exposure



Four Emitters, 10" Wide Double Exposure

BlueWave AX-550 V2.0 LED flood emitters offer high uniformity when multiple emitters are assembled next to each other, making them ideal for conveyor applications where a consistent cure across the entire substrate is important. The graphs in Figure 1 demonstrate the uniformity achieved when two emitters are assembled side-by-side on a conveyor.

Figure 1. Intensity Distribution of Two BlueWave® AX-550 V2.0 Emitters Mounted Side-by-Side



Configure the Conveyor to Meet Your Needs

		1 Head Conveyor	2 Head Conveyor		4 Head Conveyor
			Side-by-Side	Front-to-Back	
Chose base conveyor configuration	120V	43555	43557	43556	43558
	230V	43559	43561	43560	43562
Select matching emitter(s)	VisiCure®	60754	60754 (Order Qty 2)		60754 (Order Qty 4)
	PrimeCure®	60752	60752 (Order Qty 2)		60752 (Order Qty 4)
	RediCure®	60753	60753 (Order Qty 2)		60753 (Order Qty 4)
Controller universal for all configurations	BlueWave AX-550 V2.0	60943	60943 (Order Qty 2)		60943 (Order Qty 4)

Configuring an UVCS Conveyor with BlueWave AX-550 V2.0 Emitters:

1. Choose the part number for the base conveyor configuration – voltage and number of emitters.
2. Select matching emitters based on the number of heads and the wavelength for the application.
3. Add in the appropriate number of controllers.

Specifications

	RediCure 365 nm			PrimeCure 385 nm			VisiCure 405 nm		
LED Emitter Voltage	90V - 260V			90V - 260V			90V - 260V		
# of Lamps	1	2	4	1	2	4	1	2	4
Width of Illuminated Area*	5" [13 cm]	CM – 5" [13 cm] FW – 10" [25 cm]	10" [25 cm]	5" [13 cm]	CM – 5" [13 cm] FW – 10" [25 cm]	10" [25 cm]	5" [13 cm]	CM – 5" [13 cm] FW – 10" [25 cm]	10" [25 cm]
Maximum Intensity***	425 mW/cm^2			800 mW/cm^2			650 mW/cm^2		
Belt Speeds	0.8 – 32.0 ft/min [0.3 – 9.7 m/min]								
Belt Width	12" [30 cm]								
Vertical Clearance (Working Distance)	1.5" - 4.5" [38 mm - 114 mm]**								
Overall Dimensions (L x W x H)	50.5" x 30.5" x 22.0" [128 cm x 78 cm x 56 cm]								
Conveyor Voltage Requirements	120 or 230 VAC, 50 or 60 HZ								
Conveyor AC Current Values (Start/Run Current)	At 115 VAC, 50/60 Hz			Total Conveyor - 4.8A / 2.4A rms Fans – 0.1 A max. Motor Control - 400 mA rms					
	At 200-230 VAC, 50/60 Hz			Total Conveyor – 2.4A / 1.2A rms Fan – 0.05 A max. Motor Control - 200 mA rms					

* CM – Center Mounted, FW – Full Width

** Larger part heights are achievable with the installation of optional riser kits.

*** Intensity readings vary widely depending on the make and model of the radiometer. These are typical output intensities measured with the ACCU-CAL™ 160-LED Radiometer at a 25-mm working distance.

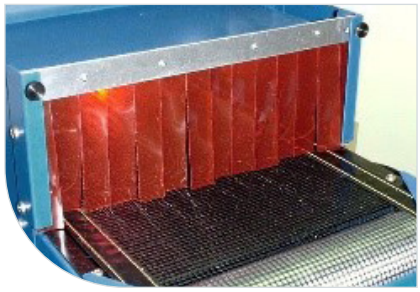
Accessories and Replacement Parts

Accessories	Quantity	Part Number
ACCU-CAL™ 160 Radiometer - LED	1	41585
Risers Kit 2" *	Pair	39218
Risers Kit 6" *	Pair	39280
Exhaust Duct Assembly**	1	43625
Transportation Cart	1	39215
Guides for 6" Curing	1	39277
Circular Duct Adapter	1	43625

Replacement Parts	Quantity	Part Number
Acrylic Tunnel Shield	1	39205
Tunnel Light Curtain	1	39207
Replacement Belt	1	39134

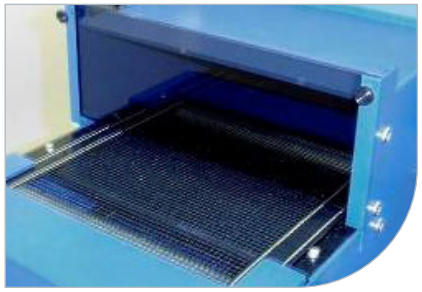
*Available on new conveyors only and installed at the factory.

** Available factory-installed at the time of order or installed separately on-site.



Tunnel Light Curtain

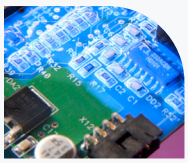
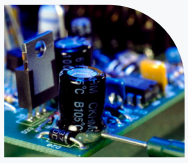
Transportation Cart



Acrylic Tunnel Shield

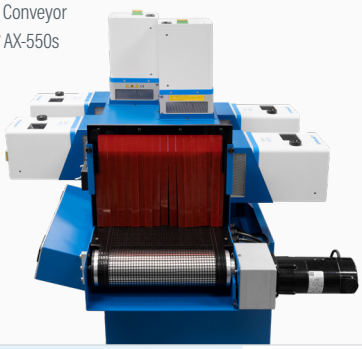
Compatible Materials & Applications

The BlueWave AX-550 is ideally suited for a number of applications in the medical, consumer electronics, automotive, aerospace and defense, optical, and appliance industries. The chart below displays some of the materials commonly used in those industries and where the BlueWave AX-550 V2.0 can be considered as a curing system.

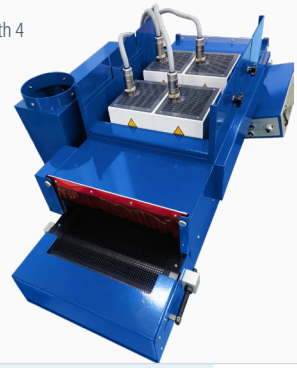
Materials		
Adhesives		Medical device (catheter, needles, tube set, facemask) assembly; glass bonding (stemware, furniture, etc.); automotive headlamp assemblies; camera module assemblies; appliance assembly; speaker assembly; optical display bonding
Conformal Coatings		Printed circuit board protection in aerospace avionics, automobiles, appliances, and consumer electronics; camera module assembly; electric vehicle battery management systems
Potting Compounds		Tamper proofing; potting electrical connectors, switches, and sensors; cable potting; medical potting*
Maskants		Surface protection for turbine blades and rotorcraft components during processing; protection for surfaces during metal finishing processes; protection of orthopaedic parts during processing; protection of PCB components for consumer electronics, automotive electronics, avionics, and medical electronics; protection for surfaces during metal finishing processes*
Encapsulants		Chip encapsulation on PCBs used in automobiles, plane and helicopter control panels, consumer electronics, appliance, and medical diagnostic equipment*
Ruggedization Materials		Flex circuit reinforcement; wire tacking; ball grid array (BGA) ruggedization; Videos graphics arrays (VGA) ruggedization; shock absorption; underfill alternative*

* Materials cured with BlueWave AX-550 V2.0 to be evaluated in customer application to their performance requirements.

Custom SideCure Conveyor with 6 BlueWave® AX-550s



Custom UVCS V2.0 with 4 BlueWave® FX-1250s



Custom Conveyor Systems

Dymax understands customers may have unique requirements for their UV curing needs. For applications that require features beyond standard conveyor system offerings, Dymax offers customized conveyor systems tailored specifically to the needs of customers.

For additional information, please contact Dymax Equipment Services at equipmentservices@dymax.com

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