UVC Lamps (12)



# **American Ultraviolet®**

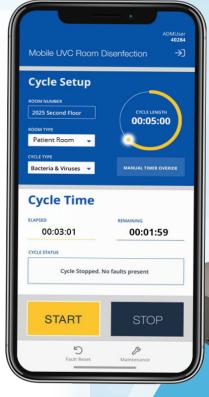
Insightful Solutions. Remarkable Results. Since 1960.

The MRS45-12 mobile UVC unit is ideal when fast UVC disinfection times are needed, including patient care environments, operating suites, nursing homes, emergency shelters, gymnasiums, manufacturing facilities, and prison cells.

UVC energy has been shown to inactivate microorganisms and viruses on surfaces and in the air providing an additional layer of cleaning to many environments.

#### **FEATURES**

- 304 stainless steel construction
- Twelve (12) 45" slimline UVC lamps
- Polished reflector for maximum intensity
- Passive infrared motion and heat sensors for 360° automatic shut off
- Control with WiFi enabled device
- Track User and location
- Downloadable cycle reports
- Large, high-quality locking casters
- 120/220 Volt, 50/60 Hertz
- Formed stainless tube structure protects lamps and improves ability to handle and transport the device



360° Motion Sensor



MRS45-12

12-Lamp Mobile Room Solution





## MRS45-12

#### 12-Lamp Mobile Room Solution

Each microorganism has a specific k-value, which simply means that a specific amount of UVC dose (UVC Dose = UVC intensity x time) will break the DNA / RNA bonds of the DNA / RNA chain. When a certain amount of UVC dose is applied, the microorganism will no longer be able to replicate<sup>2</sup>.

Using the American Ultraviolet Inactivation Chart<sup>1</sup> and the table on this page, which shows UVC dose (mJ/cm<sup>2</sup>) values, cycle times can be estimated by targeting the lethal dose for microorganisms.

#### APPROXIMATE UVC DOSE (mJ/cm²) AT VARIOUS DISTANCES

1 mJ/cm<sup>2</sup> = 1000  $\mu$ W-s/cm<sup>2</sup>

Time (minutes)	24"(0.6m)	36"(0.9m)	60"(1.5m)	120"(3m)
5	1285	670	250	60
10	2570	1340	500	120
15	3866	2024	749	190
30	7732	4048	1499	381
45	11598	6072	2249	572
60	15464	8097	2999	763



One size mobile UVC device does not fit all environments and budgets. We offer solutions that fit.

COMPARISON OF MOBILE UVC DEVICES						
	ARTZ 2.0®	MRS45-12	MRS33-8	MRS14-4		
Lamp Qty	24	12	8	4		
Lamp Size	45"	45"	33"	14"		
Controller	Any WiFi Enabled Device	An WiFi Enabled Device	Any WiFi Enabled Device	Digital Controller w/ Remote ON/OFF		
Data Logging	Yes	Yes	Yes	No		
360° Motion & IR Sensors	Yes	Yes	Yes	Yes		
Weight	130 lbs (59kg)	95 lbs (43kg)	80 lbs (36kg)	20 lbs (9kg)		
Dimensions	67"H x 28"W x 31"D	67"H x 26"W x 26"D	47"H x 20"W x 20"D	25"H x 10"W x 10"D		
Amperage Draw at 120V	15A	8A	4A	1A		
Power Cord	Retractable 20'	15'	15'	8'		
Replacement Lamps	GML 515	GML 515	GML 100	GML 600A		

<sup>&</sup>lt;sup>1</sup> Based on current literature such as Ultraviolet Germicidal Irradiation Handbook 2009 by Kowalski;

All American Ultraviolet mobile devices are designed to provide UVC energy. No warranty is offered, or responsibility taken, by American Ultraviolet, in regards to the process or efficacy of the device, as American Ultraviolet has no control over the use of the device. American Ultraviolet makes no claims to the actual log reduction of microorganisms, as it can greatly vary depending on environment. UVC is an adjunct cleaning method, and dirt, dust, and debris should be removed from surfaces before UVC application.

Prolonged, direct exposure to UVC light can cause temporary skin redness and eye irritation. American Ultraviolet devices are designed with safety in mind and, when used in accordance with the Operation and Maintenance Manual, do not allow exposure to UVC radiation, and do allow for safe operation and maintenance.



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<sup>&</sup>lt;sup>2</sup> ASHRAE Applications Handbook Ch 62 UVC for Air and Surface Disinfection