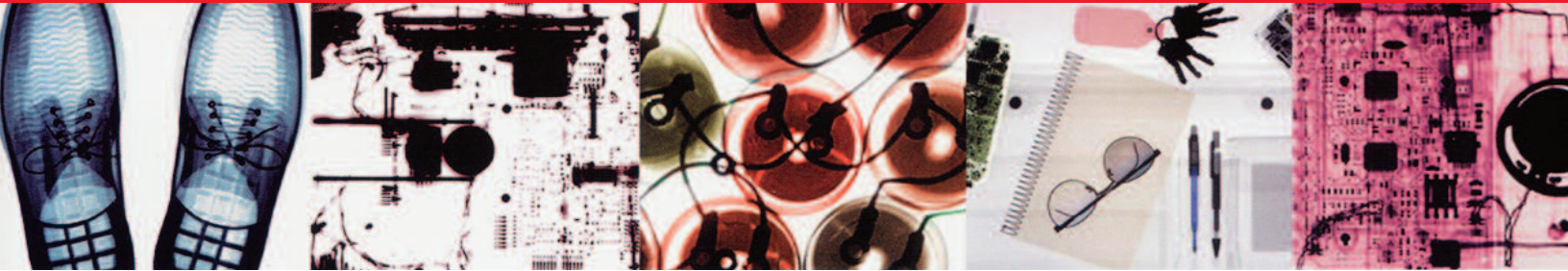


Performance + reliability + flexibility.  
It all adds up to power.



XRV Series  
Industrial X-Ray Generator





# XRV

## THE XRV SERIES 1.8KW - 6.0KW X-RAY GENERATORS

When it comes to dependable power for high resolution X-Ray inspection, Spellman High Voltage leads the way. No other manufacturer builds a more reliable, efficient, stable, or compact X-Ray Generator.

Offering negative, positive or bipolar output ranging from 160kV to 450kV, Spellman can deliver an ideal solution for a wide variety of applications.

The X-Ray inspection industry demands greater performance, higher reliability, and increased flexibility. Spellman has responded with the compact, powerful, and reliable XRV Series. Consider the benefits of the groundbreaking XRV: Low ripple and active power factor correction result in reduced banding and higher quality

scans; an encapsulated high-voltage section cuts size and reduces weight, enabling the unit to operate oil-free and with little or no maintenance; an innovative, proprietary inverter topology allows for very high efficiency and power density, thus enhancing the overall performance of your equipment.



XRV450

### WHY THE SPELLMAN XRV SERIES?

#### IT ALL ADDS UP TO PERFORMANCE...

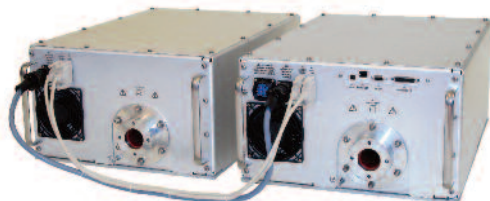
**Active PFC** – A wide input range minimizes the impact of poor mains quality on the scan.

**Low Ripple and High Stability** – Provides consistent output (kV & mA) for longer scans, reduces banding and improves data quality.

**Customizable Arc Management** – Arc detection in < 5uSec, plus integrated current limiting protects your tube. Response and recovery to arc events are fully customizable, allowing you to adjust the system to your specific testing requirements.

**Rise Time** – From zero to full kV, and settling to within 0.05% of setting within 300ms.

**Filamentary Supply** – Integrated dual filament supplies provide accurate and stable tube currents.



XRV320

#### IT ALL ADDS UP TO RELIABILITY...

**Design Validation** – An MTBF of over 22,760 hours ensures long, trouble-free operation.

**Extensive Testing** – Environmental stress screening, electrical overstress (25% over V, I, W) extended arcing, HALT, EMC and UL compliance, testing conducted on X-Ray Tube loads, and beta testing in multiple applications, supports XRV's industry leading levels of reliability.

**Encapsulation** – The XRV's oil free design eliminates leaks and environmental concerns. The encapsulated dielectric high voltage section – made of our proprietary large-pour formulation – provides significantly higher strength than oil, is more forgiving of field stresses, and eliminates the maintenance and biohazards associated with oil tanks.

#### IT ALL ADDS UP TO FLEXIBILITY...

**Small Size & Lower Cost** - XRV Series models measure and weigh far less than their industry counterparts. Affordable pricing (and lower transport costs) allows you to pass savings onto your customers.

**Plug-n-Play Compatibility & Ease of Use** – The XRV comes with industry standard and custom digital and analog communications interfaces, including: RS-232, USB; Ethernet (TCP/IP). An intuitive Windows-based GUI facilitates set-up, provides diagnostics and control of status, configuration and operation. The XRV Series is designed to work with industry-leading tubes including the HP and HPX families of X-Ray tubes used in high speed CT applications.

**Serviceability** - The XRV Series has a unique modular design, with four Field-Replaceable Units (FRUs) that minimize MTTR, service inventory and overall repair cycle time. A trouble-shooting tree and fault indicators simplify problem detection for faster, more accurate servicing. And, of course, Spellman's technical support is global, ensuring swift worldwide coverage.



XRV160



XRV225

- ◆ Highest Performance (ripple, stability, efficiency)
- ◆ Active PFC
- ◆ Digital & Analog Interface
- ◆ Compact 1.8kW to 6.0kW (Smallest and Lightest in the Industry)
- ◆ Output Voltage 160kV to 450kV (Positive, Negative or Bipolar)
- ◆ Oil-Free
- ◆ Cost Effective

## APPLICATIONS

- NDT/Inspection
- Medical Sterilization/Irradiation
- Analytical X-RAY
- Medical X-RAY
- ATE
- Security Cargo Scanning
- Digital Radiography
- Industrial CT

## XRVC

The XRV Controller (XRVC) provides intuitive, touch screen driven programming and control of any of Spellman's popular XRV Series of X-Ray generators.



For more information on the XRVC please visit our website [www.spellmanhv.com/datasheets/XRVC](http://www.spellmanhv.com/datasheets/XRVC)

## SUPERIOR ENGINEERING

When compared head-to-head with other X-Ray inspection generators, Spellman XRV Series X-Ray generators lead the field in every significant way.

	SPELLMAN	COMPETITOR "A"	COMPETITOR "B"
<b>PERFORMANCE</b>			
Active Power Factor Correction	Yes	No	No
Ripple	0.025%-0.1%	0.15%	0.10%
Stability	50ppm/°C	100ppm	80ppm
Accuracy	+/- 0.25%	+/- 2.5%	+/- 1%
Efficiency	>93%	80%	>85%
Ambient Temp	0-50 °C	10-35 °C	0-40 °C
<b>RELIABILITY</b>			
MTBF	22,760hrs	Not Published	Not Published
Dielectric	Silicone RTV	Oil	Oil
<b>FLEXIBILITY</b>			
Interface	Analog, RS-232, Ethernet and USB	Analog, RS-232	Analog, RS-232
Dimensions:			
160kV	10.5"H x 17"W x 24"D	28.7"H x 17.1"W x 26.3"D	26.9"H x 14.8"W x 24.6"D
225kV	16" H x 17" W x 31" D	31" H x 17" W x 32" D	28" H x 34" W x 49" D
Weight:			
160kV	150lbs	485lbs	176lbs
225kV	240lbs	529lbs	374lbs

\* Spellman XRV 320kV & 450kV models are 2 x 160 & 225kV packages respectively



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For more detailed information on the XRV Series,  
please visit [www.spellmanhv.com/datasheets/XRV](http://www.spellmanhv.com/datasheets/XRV)