



SourceBlock™

(Stock, or Custom OEM X-Ray Sources)

SourceBlock™

By Source-Ray, Inc. is a modern technology that integrates an X-ray tube and a high voltage generator into one physical package.

SourceBlock is appropriate for all medical and industrial x-ray applications, including EDS. It is also well suited for NDT or x-ray analysis (including food inspection) or analytical x-ray (XRD, XRF techniques).

Most models are rated for continuous operation and utilize air cooling. All units can be configured for digital (RS-232), or analog interfaces. Various models can be UL and FDA certified at the



Low Power Family

Model Number	SB-50-1K-BW	SB-60-50	SB-80-250/500	SB-80-1K	SB-80-1K-P (Pulsed Output)	SB-100-350-BW	SB-120-350
Modality Served	Industrial & Medical	Industrial & Medical	Industrial & Medical	Industrial & Medical	Industrial & Medical	Industrial & Medical	Industrial
Applications	Specimen Radiography	Inspection, Gauging	Inspection	Inspection, Micro-CT	Inspection, Micro-CT	Imaging	Inspection, Gauging
Power Supply	Integrated HF Inverter	Integrated HF Inverter	Integrated HF Inverter	Integrated HF Inverter	Integrated HF Inverter	Integrated HF Inverter	Integrated HF Inverter
X-Ray Tube	Beryllium, or Glass	Glass	Glass	Glass	Glass	Beryllium	Glass
Min. Focal Spot	50 microns*	100 microns	33 microns	33 microns	33 microns	75 microns	75, or 500 microns
Port Material	Beryllium	Ultem	Ultem	Ultem	Ultem	Beryllium	Ultem
Input Power	26 VDC, 3.5A †	24 VDC, 2A †	24 VDC, 2A †	26 VDC, 5A †	26 VDC, 5A †	24 VDC, 4A †	24 VDC, 4A †
Duty Cycle	50%	100%	100%	100%	50% Pulsed	100%	100%
Cooling	Forced Air	Convection	Convection	Forced Air	Forced Air	Forced Air	Forced Air
kVp Range	25 – 50	30 – 60	35 – 80	35 – 80	35 – 80	40 – 100	60 – 120
mA Range	20 – 1000 uA	20 – 50 uA	20 – 250 / 500 uA	0.020 – 1.0 mA	0.020 – 1.0 mA	20 – 350 uA	20 – 350 uA
Line Reg. (kVp)	0.10%	0.10%	0.10%	0.10%	0.10%	0.10%	0.10%
Load Reg. (kVp)	0.10%	0.10%	0.10%	0.10%	0.10%	0.10%	0.10%
Line Reg. (mA)	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
Load Reg. (mA)	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
Ripple	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
Rise Time (kVp)	< 250 mS	< 250 mS	< 250 mS	< 250 mS	< 10 mS	< 250 mS	< 250 mS
Set-ability	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
Temp. Stability	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Operating Temp.	10 - 35° C	10 - 35° C	10 - 35° C	10 - 35° C	10 - 35° C	10 - 35° C	10 - 35° C
Storage Temp.	0 - 45° C	0 - 45° C	0 - 45° C	0 - 45° C	0 - 45° C	0 - 45° C	0 - 45° C
Size (approx. ")	8.5 x 3.5 x 5.0	8.6 x 4.0 x 5.25	8.6 x 4.0 x 5.25	11 x 6.6 x 5.25	11 x 6.6 x 5.25	9.5 x 6.5 x 5.5	9.5 x 6.5 x 5.5
Weight (approx.)	16.5 Lbs.	16.5 Lbs.	16.5 Lbs.	14.5 Lbs.	14.5 Lbs.	22 Lbs.	24 Lbs.
X-Ray Shielding	Yes	Yes	250 Yes, 500 No	No	No	No	No
Warranty	2 Year, X-Ray Tube 1 year Prorated	2 Year, X-Ray Tube 1 year Prorated	2 Year, X-Ray Tube 1 year Prorated	2 Year, X-Ray Tube 1 year Prorated	2 Year, X-Ray Tube 1 year Prorated	2 Year, X-Ray Tube 1 year Prorated	2 Year, X-Ray Tube 1 year Prorated

Specifications Subject To Change Without Notice

Optional Control Units: Reference Individual Brochures for Specifications

Digital Interface: Model DI-RS232

Human Machine Interface: Model PI-3.8A

UL 60601-1 on Models: SB-50-1K-BW, SB-60-50, SB-80-250, SB-80-500 & SB-80-1K

Custom Configurations Available.

*nominal spot sizes per IEC336, JISZ47045, NEMA XR5

† Recommended Power Supply, VOLGEN SPN150-24S (+/-10% Adjustable)

Brochure_SourceBlock Rev 1

High Power Family

Model Number	XRS-125-7K-P (Pulsed Output)	XRS-140-15K-P (Pulsed Output)	XRS-135-5K-BW-HE	XRS-160-5K	XRS-100-13K-P-3T Pulsed Output)
Modality Served	Medical	Medical	Laboratory	Industrial	Medical
Applications	Mini CT	Mini CT	Irradiation	Inspection	Cone Beam
Power Supply	HF Inverter, Pulsed	HF Inverter, Pulsed	HF Inverter, PFC	HF Inverter, PFC	HF Inverter, Pulsed
X-Ray Tube	Glass	Glass	Beryllium	Glass	Glass (3 tubes)
Min. Focal Spot	0.5 mm	0.6 mm	1.4 mm	0.4, or 1.2 mm	.05 mm
Port Material	Aluminum	Aluminum	Beryllium	Ultem	Aluminum
Input Power	120 VAC	120 VAC	100-230 VAC	100—230 VAC	120 / 240 VAC
Cooling	Forced Air	Forced Air	Integrated Heat Exchanger	Integrated Heat Exchanger	Forced Air
kVp Range	120 – 125	120 – 140	20 – 135	40 – 160	400 - 100
mA Range	5.0 – 7.0 mA	10 – 10 mA	0.1 – 5.0 mA	0.1 – 5.0 mA	1.0 - 13 mA
Line Reg. (kVp)	0.1%	0.1%	0.1%	0.1%	0.1%
Load Reg. (kVp)	0.1%	0.1%	0.1%	0.1%	0.1%
Line Reg. (mA)	0.5%	0.5%	0.5%	0.5%	0.5%
Load Reg. (mA)	0.5%	0.5%	0.5%	0.5%	0.5%
Ripple	<1%	<1%	<1%	<1%	<1%
Rise Time (kVp)	<5 mS	<5 mS	<1 mS	<1 mS	<5 mS
Set-ability	0.5%	0.5%	0.5%	0.5%	0.5%
Operating Temp.	0 - 35° C	10 - 35° C	10 - 35° C	10 - 35° C	10 - 35° C
Storage Temp.	0 - 45° C	0 - 45° C	0 - 45° C	0 - 45° C	0 - 45° C
Size (approx. ")	11.25 x 6.4 x 4.5	11.25 x 11.35 x 4.5	18.25 x 18.0 x 8.0	18.25 x 18.0 x 8.0	15.9 x 10.25 x 6.0
Weight (approx.)	26 Lbs.	37 Lbs.	115 Lbs.	115 Lbs.	55 Lbs.
X-Ray Shielding Construction	Yes	Yes	Yes	Yes	Yes
	Two Piece	Two Piece	Two Piece	Two Piece	Two Piece
Warranty	1 Year, X-Ray Tube 1 year Prorated	1 Year, X-Ray Tube 1 year Prorated	1 Year, X-Ray Tube 1 year Prorated	1 Year, X-Ray Tube 1 year Prorated	1 Year, X-Ray Tube 1 year Prorated

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Optional Control Units: Reference Individual Brochures for Specifications

Digital Interface: Model DI-RS232

Human Machine Interface: Model PI-3.8A

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