

# SAE SYSTEMS

## P-XIS Portable X-Ray Inspection System

P-XIS Has a wide range of applications in customs, law enforcement, airport security and other areas.

- Inspection of mail and small articles
- Detection of Bombs and Explosive devices
- Searching for concealed eavesdropping devices in furniture, office equipment, etc
- Non destructive testing and evaluation

The P-XIS X-Ray system is easy to use, reliable and completely safe to operate. It provides excellent detecting capabilities with no harmful effects on the user or service personnel.



### System layout

- "BU-4" control unit is based on an industrial microprocessor and 12" TFT LCD with touch screen
- "SKB-3D" digital camera unit (1280x1024, 14-bit)
- Interchangeable X-ray converter viewing area: 300x400 mm (standard) with converter unit support. Interchangeable converters (190x250 and 410x550 mm) are available on request
- Specially designed "RE-160" and "RE-120" minifocus X-ray digital generators, "RE-150MN" microfocus and any X-ray unit from the RAP series (constant potential with the voltage up to 300kV)
- Focusing device (optional for microfocus X-ray units)
- Set of connecting cables
- PC mouse & keyboard (optional)
- USB flash drive (optional)
- Rechargeable battery & charging device
- User manual
- Set of transport bags or transport case



**P-XIS is a unique portable X-Ray inspection system with a micro-focus constant potential X-Ray radiation source.**

**The voltage can be adjusted from 20 -150 kV, which allows for the inspection of objects made from different materials with varying densities and thicknesses, (20-70 kV is the optimal voltage for checking mail and thin objects, while 100-150 kV works best for baggage and thicker objects.**

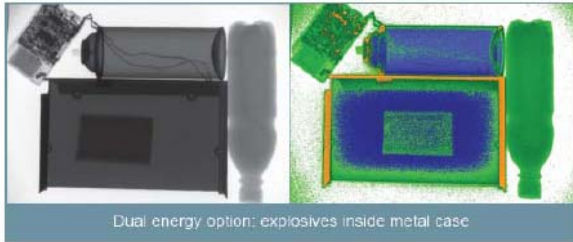
**One of the advantages of this system is its ability to inspect areas of an object in fine detail using geometric magnification (up to 40 times).**

**The X-Ray unit has a 30 micron focal spot rather than a 1mm spot used in standard systems. The resolution power it attains is an unprecedented value – 25 microns of copper-wire equivalent.**

**The distance between an object and the X-Ray source is minimal, down to a few centimetres or millimetres when using geometric magnification.**

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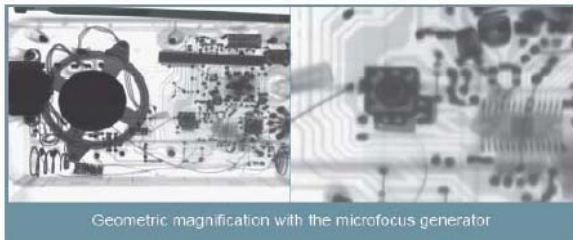
The images are reproduced on a display screen on the control unit in a positive/ negative format, pseudo colours, with enhanced contrast or in dual energy mode. Zooming in on any of the nine areas of the screen allows better identification. Obtained images can be stored in the control unit memory for further investigation or reference (up to 30,000 images). Stored images can also be edited and provided with additional text, graphics and voice information.



Dual energy option: explosives inside metal case



Determining authenticity of art work



Geometric magnification with the microfocus generator



Inspection of suspicious objects for explosives

## General specifications

	PPR-4664	PR-2432
Operating area (W x H), mm	460 x 640	240 x 320
Converter type	scanning	matrix
Detector pitch, mm	0,8 or 0,4 or 0,2*	-
Digitizing depth, bit	16	16
Through-put, pictures per min	4	12
Wireless communication range, m	up to 50	up to 50
Wire detection (copper wire), mm	0,1	0,06
Spatial resolution, Lp/mm	up to 2,5	2,7
Weight, kg	7	4,6
Dimensions (L x H x W), mm	680 x 420 x 35(55)	340 x 340 x 160

\* Standard size 0,8 can be optimized according to the customer's needs (0,4 and 0,2 detector pitch)

## General specifications

X -RAY UNIT	RE-160	RE-120	RE-150MN	RAP 220-5
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Operation mode	5-25 second exposures in single energy mode			
Max. X-ray tube voltage, kV	160	120	150	220
Focal spot size, $\mu\text{m}$	800	600	80	2000
Resolution (copper wire), $\mu\text{m}$	80	60	40	80
Total penetration (Al equivalent), mm	120	65	80	200
Total penetration (Fe equivalent), mm	40	24	20	60

## X-RAY IMAGE CONVERTER

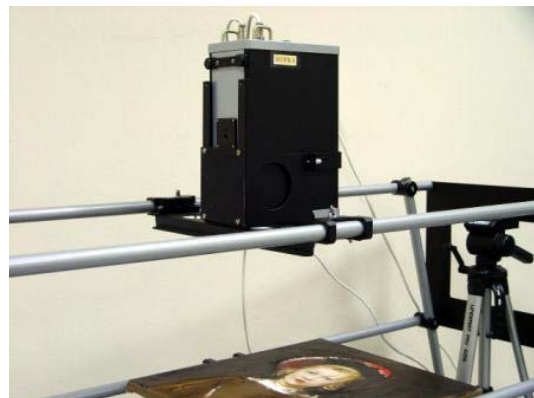
Camera unit	Digital - SKB-3D 1280x1024, 14 bit
Interchangeable converter - screening area, mm	"PR-4" - 190x250
	"PR-5" - 300x400 (standard)
	"PR-6" - 410x550

CONTROL UNIT	"BU-4"
Display	12" colour TFT touch screen display
Memory size (image number )	30 000
Battery life	2 hours, or 60 X-ray image acquisitions
Through-put	60 pictures per hour
Operating temperature	- 20°C to +50°C (-4°F to +122°F)
Relative humidity	90% (35°C / 95°F)
Weight, kg*	less than 29

\*- Standard system configuration (P-XIS with RE-150MN)



**P-XIS Vehicle Inspection in use by customs**



**Painting Authentication work using P-XIS**