



DIRECTIONAL UNITS

SITEX & SITEXS



PORTABLE X-RAY GENERATOR

**Increase the reliability of on-site X-ray techniques
while decreasing their costs**

OUR CHALLENGE...

« To increase the reliability of
on-site X-ray techniques while
decreasing their costs »

To successfully meet this challenge,
ICM's engineers have worked at
improving upon what we consider
to be largely tried and tested
techniques.

The technological options were
determined at each development
stage on the basis of quality,
general reliability and the need to
substantially increase the life of the
X-ray tube.

If you are already impressed with the
reliability of the **SITEX** and **SITEXS**
generators, we are confident that you
will be even more impressed with
their outstanding performance levels.
These performance levels will enable
you to take advantage of the most
favorable overall operating costs
available to the market.



A SIMPLE & EFFECTIVE PRINCIPLE

All **SITEX** and **SITEXS** units contain a
rod anode. This is the focal spot that is
outside the SF₆-insulated high-voltage
generator. As maximum advantages are
derived from this ideal configuration, for
one and the same thickness, the volume
of lead required for standard radiation
protection is considerably reduced.

Consequently, the reduced weight that
is achieved makes it possible for further
investments to be made in the quality
and general improvement of the level
of performance (robustness, cooling,
accessories etc).

We can confirm that **SITEX** and **SITEXS**
are among the lightest portable X-ray
generators available to the market.

MEASUREMENT & CONTROL

Representing another first in a portable,
the **SITEX** and **SITEXS** have a facility to
ensure the direct and true measurement
of the high voltage. This essential
information enables the control system to
guarantee the stability and reproducibility
of the radiological parameters based
on true high-voltage values rather than
merely estimating an HV value based on
dose output.

PERFORMANCE

A high-efficiency heat exchanger has
been developed in collaboration with
the Institute of Thermo-mechanics at
the University of Liege. This results in
the possibility of a 100% working cycle
under completely safe conditions, whilst
simultaneously reducing the anode
temperature by 50%.

DETAILS THAT SIMPLY IMPROVE EVERYTHING

The **SITEX** directional generators are
equipped with an internal 'carousel'. This
contains a lead cap and 4 diaphragms
that are calibrated for the films that are
used the most. Ensuring protection from
accidental on-site losses and weighing
in total a mere 1.0 kg, this very practical
device replaces approximately 20 kg of
fragile and space-consuming accessories.
The carousel fitted on the **SITEXS**
provides the same features and is
equipped with a laser pointer. To ensure
ease of handling, direct access has been
arranged on the moving part.

SITEXS, THE 'EXTRA-SMALL'...

These 'XS' X-ray generators are in fact
reduced versions of the corresponding
SITEX units available in 200, 225 and
225 kV versions and provide considerably
more compactness.

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SITEX & SITEXS directional technical specifications :

SITEX & XS DIRECTIONAL	UNITS	D1802	D2008	D2258	D2506	D3006	D3206	D3605	XS-D2004	XS-D2254	XS-D2504
Output voltage range	kV	60 to 180	70 to 200	70 to 225	70 to 250	90 to 300	90 to 320	120 to 360	70 to 200	70 to 225	70 to 250
Output voltage selection step	kV	1	1	1	1	1	1	1	1	1	1
Tube current range	mA	1 to 3	1 to 8	1 to 8	1 to 6	1 to 6	1 to 6	1 to 5	1 to 4	1 to 4	1 to 4
Tube current range at full output	mA	2	8	8	6	6	6	5	4	4	4
Tube current selection step	mA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Radiation geometry	-	Directional	Directional	Directional	Directional	Directional	Directional	Directional	Directional	Directional	Directional
Maximum useful angle of X-ray beam	(°)	60 x 40	60 x 40	60 x 40	60 x 40	60 x 40	60 x 40	60 x 40	60 x 40	60 x 40	60 x 40
Dimension of optical focal spot	mm	0.8 x 0.8	2.5 x 2.5	2.5 x 2.5	2.5 x 2.5	2.5 x 2.5	2.5 x 2.5	2.6 x 2.6	2.5 x 2.5	2.5 x 2.5	2.5 x 2.5
Inherent filtration	mm	Equiv. 3.5 (Al)	2.5 (Al) + 0.4 (Ni)	2.5 (Al) + 0.4 (Ni)	2.5 (Al) + 0.4 (Ni)	2.5 (Al) + 0.4 (Ni)	2.5 (Al) + 0.4 (Ni)	2.5 (Al) + 0.4 (Ni)	0.4 (Ni)	0.4 (Ni)	0.4 (Ni)
Carrousel of internal diaphragms with lead cap	-	no	yes (4 + 1)	yes (4 + 1)	yes (4 + 1)	yes (4 + 1)	yes (4 + 1)	yes (4 + 1)	yes	yes	yes
Working cycle at 40° C ambient temp.	%	50'	100	100	100	100	100	100	100	100	100
Operating temperature range	°C	-25 to +70	-25 to +70	-25 to +70	-25 to +70	-25 to +70	-25 to +70	-25 to +70	-25 to +70	-25 to +70	-25 to +70
Storage temperature range	°C	-40 to +80	-40 to +80	-40 to +80	-40 to +80	-40 to +80	-40 to +80	-40 to +80	-40 to +80	-40 to +80	-40 to +80
SF6 insulation pressure at 20° C	kg/cm²	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Cooling fan supply voltage	VDC	24	24	24	24	24	24	24	24	24	24
Weatherproof level	-	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65
Penetration into steel at max power (FFD=700mm/Film D7pb/D=1.5/T=20 min)	mm Fe	24	41	49	54	70	76	82	37	44	51
Guard rings	-	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Position of interconnection socket	choice	Radial	Axial/Radial	Axial/Radial	Axial/Radial	Axial/Radial	Axial/Radial	Axial/Radial	Axial/Radial	Axial/Radial	Axial/Radial
Number of telescopic centring device (FFD=700mm)	-	-	1	1	1	1	1	1	1 (laser)	1 (laser)	1 (laser)
Max. leakage dose at 1m according to DIN at full output	mSv/h	2.5	2.5	10	10	1	10	10	2.5	10	10
Microcontroller HT measurement circuit (kV and mA)	-	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Overall dimensions	mm	Ø178 x 580	Ø346 x 771	Ø346 x 771	Ø346 x 771	Ø346 x 831	Ø346 x 831	Ø400 x 930	Ø305 x 718	Ø305 x 718	Ø305 x 718
Total weight without guard rings	kg	9.5	27	27	27	30	30	46	19	19	19

* : Maximum continuous exposure time: 5 min.