

TRIGGER CERTAINTY FLASH X-RAY SYSTEMS

MODULAR INSTRUMENTS AND SOLUTIONS FOR MATERIALS RESEARCH IN DYNAMIC PROCESSES

THROUGH SMOKE, PLASTIC
AND UP TO 60MM OF STEEL,
SEE THE NEARLY IMPOSSIBLE



Varying cable lengths allow for maximum setup flexibility

Modular system advantages

- Speeds up to 10 km/s and beyond
- 20-35 ns X-ray pulses
- Add extra channels as needed
- Dual X-ray source options incl. MAT
- Fixed position and trajectory imaging
- Trigger certainty

Core components

- Computer
- Control tower
- Marx Generator pulser
- Stainless steel X-ray tube – no glass
- Flexible solid-core cables – no liquid
- Swappable anodes from 1.5mm - 4mm

X-ray detection

- Single image detectors
- Sequential image detectors

Accessories

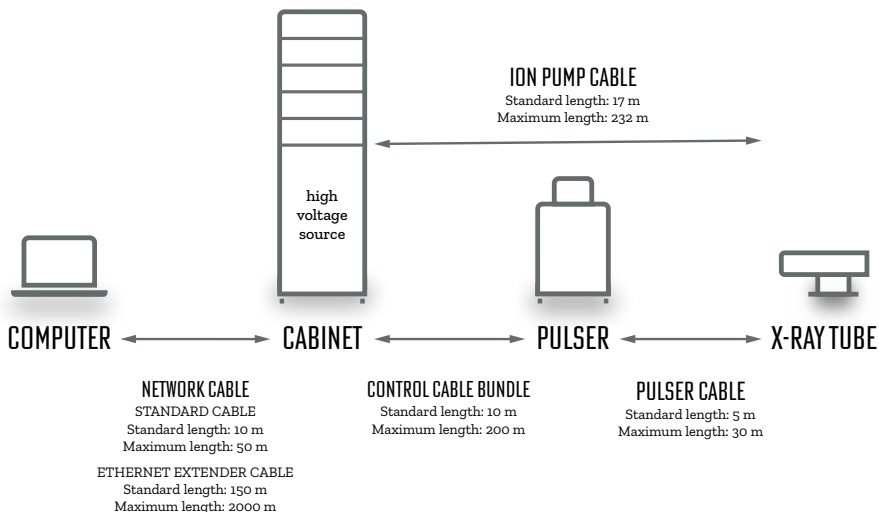
- RPS30 service stations
- 700 series compressors

Safety & shielding

- XTS series lead shields
- IB100 security units



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SCANDIFLASH FLASH X-RAY SYSTEMS COMPARISON

SYSTEM	SCF150	SCF300	SCF450	SCF450S	SCF1200
Output voltage (kV)	75-150	100-300	200-450	240-480	650-1200
Output peak current (kA)	2	10	10	10	10
Pulse width (ns)	35	20	20	25	20
Dose per pulse at 1m (mR)	1.6	9	20	25	65
Penetration of steel at 2.5m *	3mm	18mm	30mm	34mm	60mm
Source size **	1.5mm	1.5mm	1.5mm	2.5mm	2.5mm
Dual tube option	No	Yes	Yes	Yes	No
Multi anode option	Yes	Yes	Yes	Yes	No

scan this for more info



High-speed flash X-ray made simple

The time it takes to record an X-ray image depends upon the intensity of the X-ray tube. With a low intensity tube, you can easily capture static images. But, what if you want to capture dynamic events that are happening super fast and can't be seen by the human eye? Then you're going to need really fast pulses of X-rays.

Scandiflash equip scientists and engineers worldwide with turnkey solutions for high-speed X-ray imaging used as research and development tools for novel material and dynamic mechanistic investigations. We constantly strive to simplify high-speed imaging in the X-ray spectrum.

See the nearly impossible

Scandiflash Flash X-ray systems generate an extremely short exposure time X-ray pulse of 20-35 ns that enables the study of dynamic events in excess of 10 km/s allowing you to see the nearly impossible. Our instruments can be used in a diversity of fields ranging from collision mechanics to geology to test beds for large-scale facility experiments – like free electron laser setups.

What could you see with our technology?

With our Flash X-ray technology, it is possible to capture high velocity and hypervelocity impacts of materials colliding with objects like space debris traveling at extreme speeds where the materials vaporize on impact. These studies give vital insight about material deformation and enable visibility of events inside closed constructions such as high-voltage electronics. Performing breakdown studies in environments not accessible with optical methods has never been easier.

Trigger certainty

Users of Scandiflash Flash X-ray systems don't worry about "pre-fire" or "no trigger" errors. We've accomplished this by designing our systems to automatically set the correct pressure required for a selected voltage in our Marx Generator Pulsers. No complicated tabulation and testing of parameters – simply select the voltage desired, and our system optimizes for each X-ray pulse. Experiments can be completed more reliably and stay on schedule!

Which SCF system do you need?

Scandiflash Flash X-Ray systems are denoted according to their peak voltage output, which also determines the performance parameters of the system. In general, the higher the energy, the thicker and more dense the material that can be penetrated.

The SCF150 system is most suitable for lighter and thinner materials – penetrating smoke, fire and plastics. The SCF300 system is ideal for aluminum and medium density samples, while the SCF450 and SCF450S can be used to penetrate about 30 mm of steel. And the SCF1200 system will reveal what happens inside thick plates of steel up to about 60 mm.

With the Scandiflash range of systems, you can choose the right energies needed to make your setup the most effective for your particular range of applications.

* Scandiflash G Fast intensifying screens and Kodak T-MAT H film (0.7 gross film density). FXR Systems 150, 300, 450 & 450S feature a 5m pulser to X-ray tube coaxial cable. FXR System 1200 features tube in pulser.

** Source size may be varied by different anodes. Given values are typical.