

Industrial NDT Portable X-ray Flaw Detector



1.Main character:

- Light weight, portable, easy to use
- The ratio of the exposure fine to the stop time is 1:1
- Auto-train, compact x-ray generator, anode grounded, forced air cooling
- SF6 gas insulator, grounded-anode design to keep the operator safety.
- Modular structure, high degree aluminum radiator to improve 30% heat radiation
- High voltage ,time delay function protects the operator from radiation
- Strictly controlled the production techniques, nice sculpt, reasonable design.
- The frequency conversion control start rate is adaptive to different generators, and the voltage has soft start and slow shutdown.

2.Main Components:

Item	Commodity Description	Qty
1	X-ray generator	1
2	SF-07 Controller	1
3	Each YR3*2.5 power cable 10m	1
4	Control cable YR 3*2.5+6*1, each 25m	1
5	Fuse 20A	5
6	Grounding cable 5 meters	1
7	A copy of product specification	1
8	High quality aluminum alloy flight case package	2
9	Certificate of qualification	1
10	Operation Manual	1

			
X Ray Generator / 1pc	SF-07 Controller / 1pc	Control Cable / 25m	Power Cable / 10m
			
Aluminum Alloy Flight Case	Grounding Cable / 5m	Fuse / 5pcs	Document / 1set

We can customize special products according to your needs

3.Main technical parameter:

①Mini Size Parameter

Model	Type	Output Voltage (kV)	Power Capacity (KVA)	Focus size (mm*mm)	Radiation Coverage (°)	Max. Penetration (A3)	Output current	Cooling	Generator Size (mm)	Controller Size (mm)	Generator Weight (kg)	Controller Weight (kg)
XXG2505CL	Super Small	130~250	2.5	2.0*2.0	40+5	40	5mA	Air cooling	230*230*600	325*275*190	18	9
XXGH2505CLZ	Super Small	130~250	2.5	1.0*3.5	360*30	32	5mA	Air cooling	230*230*640	325*275*190	20	9
XXG3005CL	Super Small	150~300	3.0	2.5*2.5	40+5	50	5mA	Air cooling	280*280*650	325*275*190	25	9
XXGH3005CLZ	Super Small	150~300	3.0	1.0*5.0	360*30	42	5mA	Air cooling	260*260*680	325*275*190	25	9

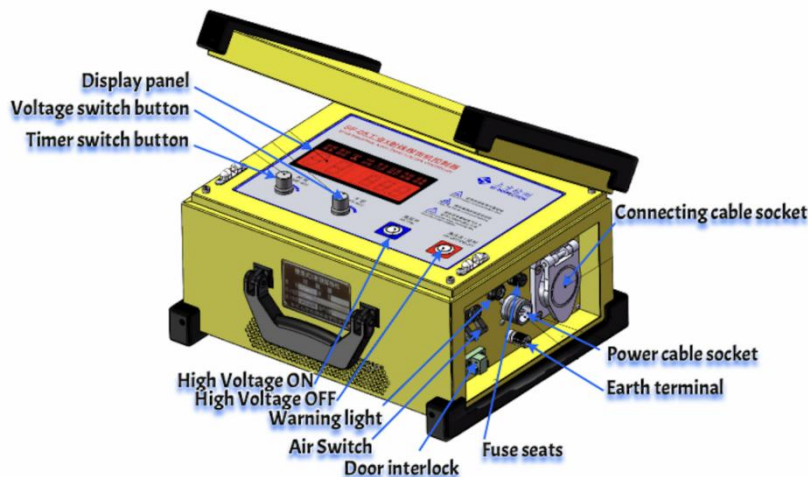
②Small Size Parameter

SPECIFICATIONS											
Model	Output Voltage (kV)	Power Capacity (KVA)	Focus size (mm*mm)	Radiation Coverage (°)	Max. Penetration (A3)	Output current	Cooling	Generator Size (mm)	Controller Size (mm)	Generator Weight (kg)	Controller Weight (kg)
XXG1605	30~160	1.5	1.0*1.0	40+5	20	5mA	Air cooling	230*230*580	325*275*190	17.5	9
XXGH1605P	30~160	1.5	1.0*2.0	360*25	18	5mA	Air cooling	230*230*580	325*275*190	17.5	9
XXGH1605Z	30~160	1.5	1.0*3.5	360*30	12	5mA	Air cooling	230*230*580	325*275*190	17.5	9
XXG2005L	100~200	2.0	1.5*1.5	40+5	30	5mA	Air cooling	230*230*580	325*275*190	17.5	9
XXGH2005LP	100~200	2.0	1.0*2.0	360*25	28	5mA	Air cooling	230*230*620	325*275*190	17.5	9
XXGH2005LZ	100~200	2.0	1.0*3.5	360*30	22	5mA	Air cooling	230*230*620	325*275*190	17.5	9
XXG2505L	130~250	2.5	2.0*2.0	40+5	40	5mA	Air cooling	280*280*620	325*275*190	23.5	9
XXGH2505LP	130~250	2.5	1.0*2.2	360*25	38	5mA	Air cooling	280*280*650	325*275*190	23.5	9
XXGH2505LZ	130~250	2.5	1.0*3.5	360*30	32	5mA	Air cooling	280*280*650	325*275*190	23.5	9
XXG3005L	150~300	3.0	2.5*2.5	40+5	50	5mA	Air cooling	320*320*660	325*275*190	31	9
XXGH3005LP	150~300	3.0	1.0*2.5	360*25	48	5mA	Air cooling	320*320*690	325*275*190	31	9
XXGH3005LZ	150~300	3.0	1.0*5.0	360*30	42	5mA	Air cooling	320*320*690	325*275*190	31	9
XXG3505	200~350	3.5	2.5*2.5	40+5	60	5mA	Air cooling	340*340*680	325*275*190	36	9
XXGH3505P	200~350	3.5	1.0*2.5	360*25	58	5mA	Air cooling	340*340*710	325*275*190	36	9
XXGH3505Z	200~350	3.5	1.0*6.0	360*30	52	5mA	Air cooling	340*340*710	325*275*190	36	9

4.Main components:

The SF-07 AC/DC dual-purpose controller adopts a photoelectric isolation microcomputer control system, equipped with voltage, current, temperature and other protections, reliable control, automatic machine training, and intelligent. The weight is about 9 kg.

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The specific characteristics of flaw detector as below:

Power supply voltage 110V-250V AC or DC, the equipment is adaptive and no conversion is required

- The control panel adopts chip components, digital microcomputer control, free of parameter adjustment and maintenance, strong anti-interference ability;
- The loop is modular structure, air duct type heat dissipation, high reliability of continuous work;
- Time and Kilovolt adjustment using shuttle knob, adjust quickly, convenient and reliable;
- Different rate adaptive frequency conversion control stat generator, voltage with a soft start slow shut off;
- Automatic warm up function, discharge automatic step-down, time automatic step;
- Generator cooling fan circuit fault detection, to ensure continuous heat dissipation;
- Exposure and working time are strictly 1:1; power failure will not affect;
- Equipped with waterproof and dustproof warning light socket, external LED exposure warning light;
- Equipped with safety door signal interlocking terminal, can be connected with

lead door control, to ensure personnel safety;

- Time-lapse exposure time can be adjusted freely, the default maximum 5 minutes;
- The controller cooling fan can be easily removed independently, and regular cleaning to ensure long-term stability of the machine;
- The upper cover adopts internal buckle, which is convenient and reliable, and can be stopped and positioned freely after opening;
- Rubber shock absorption and Angle protection around the box, more assured in field work;
- Can accumulate record exposure time
- No need to open the cover, specific combination of buttons can set a variety of compatible model parameters.

5.Controller

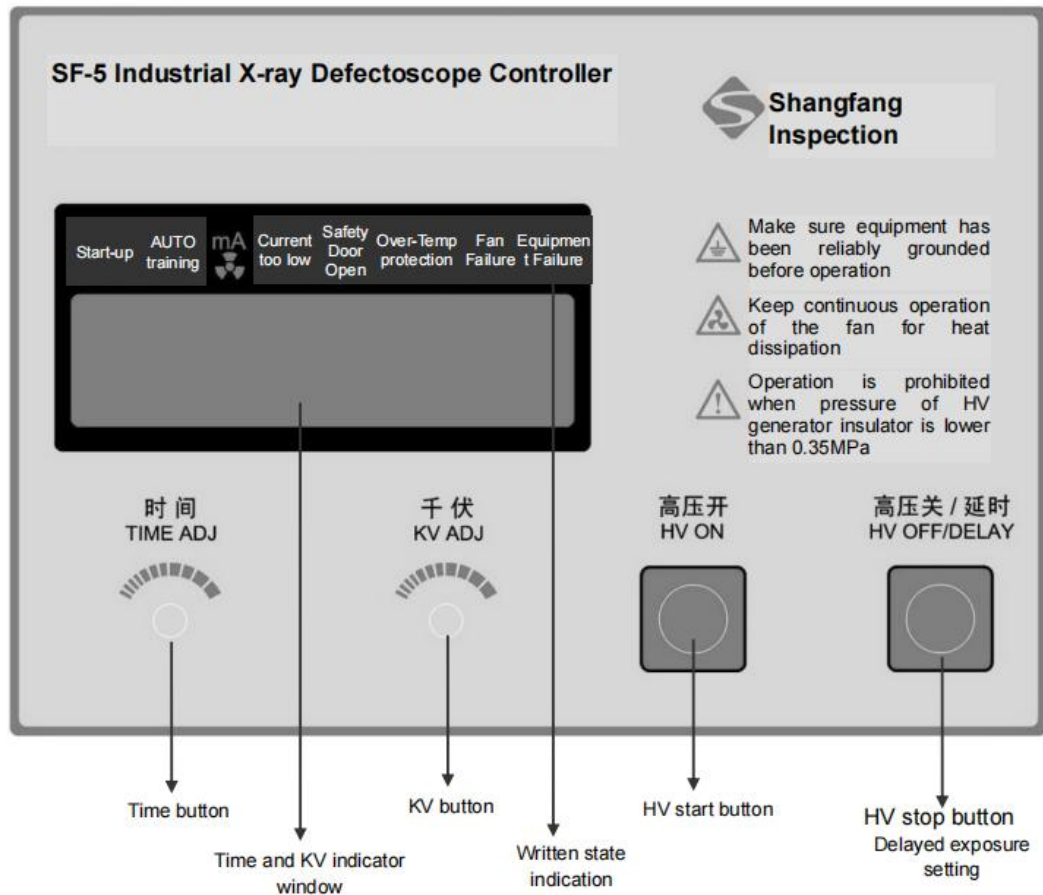
Material:

1. Stainless steel shell, with color identification indicator panel, detailed and easy to operate
2. 100-pin chip, stable signal, strong functionality
3. High-end capacitor configuration, more stable performance
4. Rubber shock-absorbing corner guards around the box



Feature

1. Modular design and manufacturing of the core, duct-type heat dissipation structure to ensure continuous heat dissipation
2. The control circuit board uses SMD components, digital control, no parameter adjustment, and strong anti-interference ability
3. The time and kilovolt adjustment uses a shuttle knob, which is quick to adjust, convenient and reliable
4. The inverter circuit adopts a high-power IGBG module design, fully automatic training
5. The exposure and working time are strictly 1:1, the exposure time can be accumulated and recorded, and the delayed exposure time can be freely adjusted



Safety

1. The safety door signal interlock terminal can be interlocked with the flaw detection room to ensure personnel safety
2. The power lock switch is safe and reliable
3. Waterproof and dustproof warning light socket, which can be connected to an AC220V exposure warning light



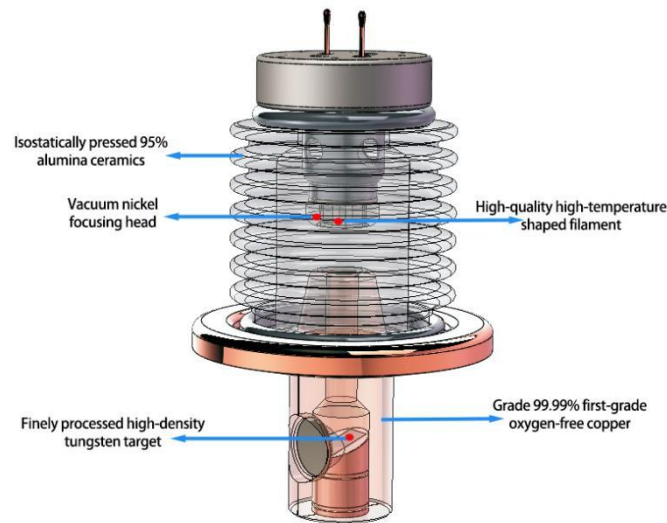
6.Ceramic X-Ray tube

Ceramic X-Ray tube is made by ourselves, using high quality oxygen-free copper, high density isostatic pressing ceramics, ultra-high vacuum degree, high temperature resistance, good seismic performance.



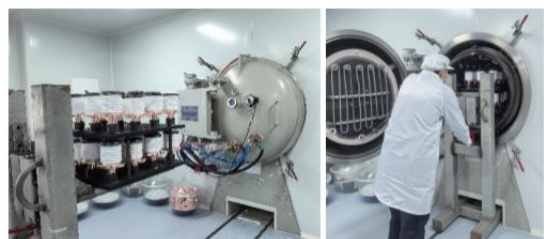
Material

1. Grade 99.99% first-grade oxygen-free copper
2. Isostatically pressed 95% alumina ceramics
3. Finely processed high-density tungsten target
4. High-quality high-temperature shaped filament
5. Vacuum nickel focusing head



Manufacturing process

1. Pollution-free electroplating of parts
2. High-temperature and high-vacuum degassing of parts
3. Vacuum plasma cleaning of parts surface
4. Helium mass spectrometry leak detection of components and whole tubes, avoiding invisible leaks, leak rate better than $10^{-11}\text{Pa m}^3/\text{s}$
5. Ultra-high oil-free vacuum system is used for the ceramic tube, and it is sealed and discharged once
6. The ceramic tube assembly line circulation mode is experienced and tested, and the quality of the finished product is guaranteed



7.HV Coil with Premium Copper Wire

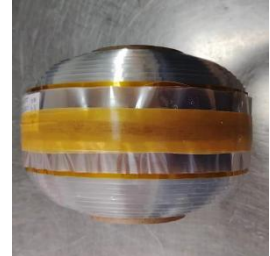
The HV coil adopts polyester film heat-resistant insulation material and high-temperature resistant oxygen-free copper enameled wire.

Using the same copper wire supplier Rigaku ensures:

High Conductivity – Minimizes energy loss, improving efficiency.

Precision Winding – Ensures consistent performance under high voltage.

Strict Quality Control – Reduces defects, enhancing coil lifespan.



8.Cable

1. Adopt brand socket
2. Warm color: orange, visual enjoyment
3. The cable is customized by brand manufacturers
4. Pressure-resistant, wear-resistant, corrosion-resistant, high-temperature-resistant, low-temperature-resistant, adaptable to different working environments



9.The pictures are for reference









Aluminum alloy flight packaging box option



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