



ISOVOLT Titan|neo

Robust, reliable stationary X-ray generators

The ISOVOLT Titan|neo generator powers a range of radiographic inspection technology—delivering the most reliable, consistent results in even the highest accuracy applications. So you can increase precision and inspect multiple parts each day even in 24/7 Testing Machines applications.

Increased reproducibility: Reduce exposure times for various materials in several operation modes with high, stable radiation and fluctuations <0.05%.

Greater dependability: An extended tube range and maximum current ensure enhanced imaging contrast and high penetration power.

Unmatched flexibility: Its modular design includes intelligent tube integration and permanent system monitoring—offering unmatched ramp-up times* and a 100% duty cycle for continuous operation in inline systems**.

Features



Powerful performance



Permanent system monitoring



Modular design for easy integration



Convenient, user-friendly controls



Built-in safety features

*Depending on permissible tube data.

**Subject to operational generator cooling.

Technical specifications

High voltage generator	HP160	HP225
Max out voltage kV	160	225
Max out current mA	45	45
Max out power kW	4.5 (limited by tube spec; 1 phase mains: 4.0 kW)	4.5 (limited by tube spec; 1 phase mains: 4.0 kW)
Insulation	Oil	Oil
Housing dim (w x d x h)	340 x 945 x 750 mm (13.38" x 37.20" x 29.52")	340 x 945 x 750 mm (13.38" x 37.20" x 29.52")
Weight	195 kg (429.9 lbs)	190 kg (418.87 lbs)
Tube voltage		
Pre-set and settings	From 5 to 160 kV in 1 kV	From 5 to 225 kV in 1 kV
Dig display of set and act values	3 digits (set); 4 digits (act)	3 digits (set) ; 4 digits (act)
Display resolution	1 kV (set); 0.1 kV (act)	1 kV (set) ; 0.1 kV (act)
Accuracy	<1%	<1%
Reproducibility	<0.01%	<0.01%
Temperature drift	<80 ppm/K	<100 ppm/K
Tube current		
Pre-set and settings	From 0.1 to 45 mA in 0.1 mA	From 0.1 to 45 mA in 0.1 mA
Dig display of set and act values	3 digits	3 digits
Display resolution	0.1 mA	0.1 mA
Accuracy	<1%	<1%
Reproducibility	<0.25%	<0.25%
Temperature drift	<100 ppm/K	<100 ppm/K
Exposure time		
Programmable timer	1	1
Pre-set and setting	1 ... 9999 s	1 ... 9999 s
Dig display of set and act values	4 digits	4 digits
Prewarning	Audible and visible	Audible and visible
Pre-set and setting	2 ... 120 s or deactivated	2 ... 120 s or deactivated
Programmed mode		
Number of storable programs	250	250
Warm-up	Auto mode based on real time clock	Auto mode based on real time clock
X-ray tube set up	Tube selectable from a database of more than 20 pre-programmed, unipolar tubes	Tube selectable from a database of more than 20 pre-programmed, unipolar tubes
Operation history	Stored on SD	Stored on SD
Warm-up history	Stored on SD	Stored on SD
Control module		
Dimension wxdxh	440 x 114 x 295 mm (17.32" x 4.48" x 11.61")	440 x 114 x 295 mm (17.32" x 4.48" x 11.61")
Weight	3.8 kg (8.37 lbs)	3.8 kg (8.37 lbs)
Connected loads		
Power connection	AUX: 1N PE 230 V ±10% 50/60 Hz 10 A, MAIN: 3N PE 400/230 V ±10% 50/60 Hz 20 A or 1N PE 230 V ±10% 50/60 Hz 63 A, 3-phase, grounded neutral TN-S or TN-C-S mains (star connected system), optional 3-phase isolation transformer	AUX: 1N PE 230 V ±10% 50/60 Hz 10 A, MAIN: 3N PE 400/230 V ±10% 50/60 Hz 20 A or 1N PE 230 V ±10% 50/60 Hz 63 A, 3-phase, grounded neutral TN-S or TN-C-S mains (star connected system), optional 3-phase isolation transformer
Grounding	Separate grounding for X-ray tube and high voltage generator (minimum 6 mm ²)	Separate grounding for X-ray tube and high voltage generator (minimum 6 mm ²)
Mains fuses	AUX: 10 A (1N PE) MAIN: 63 A (1N PE) or 20 A (3N PE) Time-delay fuses, customer-supplied	AUX: 10 A (1N PE) MAIN: 63 A (1N PE) or 20 A (3N PE) Time-delay fuses, customer-supplied
Operating temperature range	0 °C to +40 °C	0 °C to +40 °C
Storage temperature range	-30 °C to +70 °C	-30 °C to +70 °C

High voltage generator	HP320	HP450	HR240
Max out voltage kV	320	450	240
Max out current mA	45	45	3
Max out power kW	4.5 (limited by tube spec; 1 phase mains: 3.5 kW)	4.5 (limited by tube spec; 1 phase mains: 3.5 kW)	0.320 (limited by tube spec)
Insulation	Oil	Oil	Oil
Housing dim (w x d x h)	340 x 945 x 750 + 340 x 945 x 540 mm (13.38" x 37.20" x 29.52") + 13.38" x 37.20" x 21.25")	340 x 945 x 750 + 340 x 945 x 540 mm (13.38" x 37.20" x 29.52") + 13.38" x 37.20" x 21.25")	340 x 945 x 750 mm (13.38" x 37.20" x 29.52")
Weight	190+140 kg (418.87 + 308.64 lbs)	190+140 kg (418.87 + 308.64 lbs)	170 kg (374.78 lbs)
Tube voltage			
Preselect and settings	From 10 to 320 kV in 1 kV	From 10 to 450 kV in 1 kV	From 5 to 240 kV in 1 kV
Dig display of set and act values	3 digits (set); 4 digits (act)	3 digits (set); 4 digits (act)	3 digits
Display resolution	1 kV (set); 0.1 kV (act)	1 kV (set); 0.1 kV (act)	1 kV
Accuracy	<1%	<1%	<1%
Reproducibility	<0.01%	<0.01%	<0.01%
Temperature drift	<80 ppm/K	<80 ppm/K	<80 ppm/K
Tube current			
Preselect and settings	From 0.1 to 45 mA in 0.1 mA	From 0.1 to 45 mA in 0.1 mA	From 0.01 to 3 mA in 0.001 mA
Dig display of set and act values	3 digits	3 digits	4 digits
Display resolution	0.1 mA	0.1 mA	0.001 mA
Accuracy	<1%	<1%	<1%
Reproducibility	<0.25%	<0.25%	<0.25%
Temperature drift	<100 ppm/K	<100 ppm/K	<100 ppm/K
Exposure time			
Programmable timer	1	1	1
Preselect and setting	1 ... 9999 s	1 ... 9999 s	1 ... 32767 s (xs-control)
Dig display of set and act values	4 digits	4 digits	5 digits
Prewarning	Audible and visible	Audible and visible	Audible and visible
Preselect and setting	2 ... 120 s or deactivated	2 ... 120 s or deactivated	2 ... 255 s or deactivated
Programmed mode			
Number of storable programs	250	250	—
Warm-up	Auto mode based on real time clock	Auto mode based on real time clock	Automated intelligent tube conditioning
X-ray tube set up	Tube selectable from a database of more than 25 pre-programmed, bipolar tubes	Tube selectable from a database of more than 25 pre-programmed, bipolar tubes	—
Operation history	Stored on SD	Stored on SD	—
Warm-up history	Stored on SD	Stored on SD	—

Control module			
Dimension (w x d x h)	440 x 114 x 295 mm (17.32" x 4.48" x 11.61")	440 x 114 x 295 mm (17.32" x 4.48" x 11.61")	—
Weight	3.8 kg (8.37 lbs)	3.8 kg (8.37 lbs)	—
Connected loads			
Power connection	AUX: 1N PE 230 V ±10% 50/60 Hz 10 A, MAIN: 3N PE 400/230 V ±10% 50/60 Hz 20 A or 1N PE 230 V ±10% 50/60 Hz 63 A, 3-phase, grounded neutral TN-S or TN-C-S mains (star connected system), optional 3-phase isolation transformer	AUX: 1N PE 230 V ±10% 50/60 Hz 10 A, MAIN: 3N PE 400/230 V ±10% 50/60 Hz 20 A or 1N PE 230 V ±10% 50/60 Hz 63 A, 3-phase, grounded neutral TN-S or TN-C-S mains (star connected system), optional 3-phase isolation transformer	1N PE 230 V ± 10% 50/60 HZ 10 A AUX, 1N PE 230 V ± 10% 50/60 HZ 10 A MAIN
Grounding	Separate grounding for X-ray tube and high voltage generator (min. 6 mm ²)	Separate grounding for X-ray tube and high voltage generator (min. 6 mm ²)	Separate grounding for X-ray tube and high voltage generator (min. 6 mm ²)
Mains fuses	AUX: 10 A (1N PE) MAIN: 63 A (1N PE) or 20 A (3N PE) time-delay fuses, customer-supplied	AUX: 10 A (1N PE) MAIN: 63 A (1N PE) or 20 A (3N PE) time-delay fuses, customer-supplied	10 A (1N PE) integrated into aux switch, 10 A (1N PE) integrated into main switch
Operating temperature range	0 °C to +40 °C	0 °C to +40 °C	0 °C to +40 °C
Storage temperature range	-30 °C to +70 °C	-30 °C to +70 °C	-30 °C to +70 °C

Waygate Technologies

Bogenstr. 41
22926 Ahrensburg
Germany

Tel.: +49 4102 807 0
Fax: +49 4102 807 189
E-mail: xray.info@bakerhughes.com

Waygate Technologies

201 Beltway Green Blvd.
Pasadena, Texas 77503

Tel.: +1 281 542 3600

