

# TECHNICAL DATA

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ALTA750<sup>®</sup> X-RAY TUBE

### PRODUCT DESCRIPTION

The ALTA750<sup>®</sup> is an X-Ray Tube specifically designed for use with CT Scanners. This tube is intended for reload in the ALTA750<sup>®</sup> X-Ray Tube Housing and used with the Richardson RELL HE1256.2 Heat Exchanger or the Varex\* HE-1256 Rev 2 Heat Exchanger.

#### INTENDED USE

The ALTA750® Tube is intended to be used in an X-Ray tube housing assembly. The assembly is designed to emit ionizing radiation and is intended to be used as a component of a CT system which is used for diagnostic and interventional X-Ray applications on a stationary system.

### **INCLUDED INFORMATION AND SPECIFICATIONS**

- Tube Specifications
- Volumetric / Helical Scan Ratings
- Cathode Emission Characteristics
- Anode Heating and Cooling Curves
- Disposal Information

Originally written in English.

Additional copies and alternate language versions available upon request from techdata@rell.com

\*This product is not affiliated with, endorsed by, or sponsored by Varex Imaging.



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### **TUBE SPECIFICATIONS**

Nominal X-ray Tube Voltage	ΚV	150		
Anode Diameter	mm	200		
Anode Material		ReW-TZM-C		
Anode Angle	Degrees	7		
Nominal Focal Spot – Small Loading Factor 120kV x 200mA	IEC 60336	0.9 x 0.8		
Nominal Focal Spot – Large IEC 60336 Loading Factor 120kV x 200mA	IEC 60336	1.6 x 1.4		
Anode heat content (Maximum)	MJ	5.4		
Nominal Anode Input Power - Large	kW	72		
Nominal Anode Input Power - Small	kW	42		
Anode Heat Dissipation (Maximum)	W	12,000		
Maximum Filament Current - Large	Α	5		
Maximum Filament Voltage - Large	V	14.4		
Maximum Filament Current - Small	Α	4.8		
Maximum Filament Voltage - Small	V	12.3		

### HOUSING SPECIFICATIONS

Refer to ALTA750® X-Ray Tube Housing Technical Data.



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### **VOLUMETRIC / HELICAL SCAN RATINGS IEC 60613**

3Ø 50 Hz

0.9 x 0.8 Focal Spot 7 Degree Target

Volume Scan	Maximum Allowed Tube Current (mA) as a Function of the Following Starting Heat Storage and Tube Voltages									
Time (Seconds)	Starting Heat Storage 40%			Starting	Starting Heat Storage 55%			Starting Heat Storage 70%		
	100 kV	120 kV	135 kV	100 kV	120 kV	135 kV	100 kV	120 kV	135 kV	
4	300	250	225	300	250	225	300	250	225	
10	300	250	225	300	250	225	300	250	225	
15	300	250	225	300	250	225	300	250	225	
20	300	250	225	300	250	225	300	250	225	
30	300	250	225	300	250	225	300	250	225	
45	300	250	225	300	250	225	300	250	225	
60	300	250	225	300	250	225	250	200	175	
75	300	250	225	300	250	225	225	175	150	
80	300	250	225	300	250	225	200	175	150	
90	300	250	225	275	225	200	200	150	150	

3Ø 50 Hz

1.6 x 1.4 Focal Spot 7 Degree Target

Volume Scan	Maximum Allowed Tube Current (mA) as a Function of the Following Starting Heat Storage and Tube Voltages									
Time (Seconds)	Starting	Heat Stor	age 40%	Starting Heat Storage 55%			Starting Heat Storage 70%			
	100 kV	120 kV	135 kV	100 kV	120 kV	135 kV	100 kV	120 kV	135 kV	
4	670	560	500	670	560	500	670	560	500	
10	670	560	500	670	560	500	670	560	490	
15	670	560	500	670	560	500	640	530	470	
20	670	560	500	670	560	500	610	510	450	
30	600	500	440	600	500	440	440	360	320	
45	540	450	400	480	400	350	320	270	240	
60	450	370	330	380	310	280	260	220	190	
75	410	340	300	310	260	230	230	190	170	
80	380	320	280	300	250	220	220	180	160	
90	350	290	260	270	230	200	200	170	150	

0.9 x 0.8 Focal Spot 7 Degree Target

3Ø 100 Hz **■** 

Volume Scan	Maximum Allowed Tube Current (mA) as a Function of the Following Starting Heat Storage and Tube Voltages									
Time (Seconds)	Starting	Heat Stora	age 40%	Starting	Heat Stor	age 55%	Starting Heat Storage 70%			
	100 kV	120 kV	135 kV	100 kV	120 kV	135 kV	100 kV	120 kV	135 kV	
4	425	350	300	425	350	300	425	350	300	
10	425	350	300	425	350	300	425	350	300	
15	425	350	300	425	350	300	425	350	300	
20	425	350	300	425	350	300	425	350	300	
30	425	350	300	425	350	300	400	325	300	
45	425	350	300	425	350	300	300	250	225	
60	425	350	300	375	300	275	250	200	175	
75	400	325	300	3000	250	225	225	175	150	
80	375	300	275	300	250	225	200	175	150	
90	350	275	250	275	225	200	200	150	150	

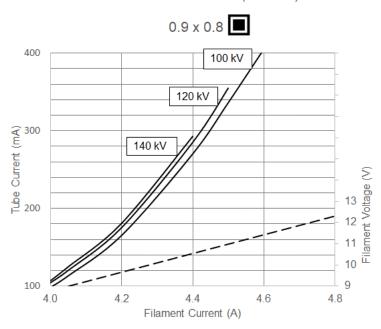
3Ø 100 Hz

1.6 x 1.4 Focal Spot 7 Degree Target

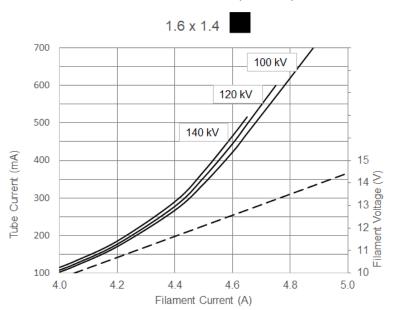
Volume Scan	Maximum Allowed Tube Current (mA) as a Function of the Following Starting Heat Storage and Tube Voltages									
Time (Seconds)	Starting Heat Storage 40%			Starting Heat Storage 55%			Starting Heat Storage 70%			
	100 kV	120 kV	135 kV	100 kV	120 kV	135 kV	100 kV	120 kV	135 kV	
4	720	600	530	720	600	530	720	600	530	
10	720	600	530	720	600	530	720	600	530	
15	720	600	530	720	600	530	720	600	530	
20	720	600	530	720	600	530	610	510	450	
30	600	500	440	600	500	440	440	360	320	
45	540	450	400	480	400	350	320	270	240	
60	450	370	330	380	310	280	260	220	190	
75	410	340	300	310	260	230	230	190	170	
80	380	320	280	300	250	220	220	180	160	
90	350	290	260	270	230	200	200	170	150	

### **CATHODE EMISSION CHARACTERISTICS IEC 60613**

Three Phase Emission (+/-.15 A)



### Three Phase Emission (+/-.15 A)





100

### **ANODE HEATING AND COOLING CURVES IEC 60613**

#### 100 5400 16500 W 12000 W 90 4860 8800 W 80 4320 6000 W 70 3780 4000 W 3240 60 50 2700 ⊋ 40 2160 30 1620 20 1080 10 540 Cooling 0 0

Anode Heating and Cooling Curves

### **DISPOSAL INFORMATION**

0.1

Take back, proper disposal and recovery of Medical Devices takes place in accordance with European WEEE directive and the requirements of national legislation.

Time (Minutes)

10

The x-ray tube contains beryllium and cooling fluids. The x-ray tube must not be disposed in domestic or industrial waste; it must be disposed in accordance with local regulation.

The x-ray tube may be returned to Richardson Electronics for proper disposal.

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Richardson Electronics strives to be environmentally conscious. Select materials and components are recycled.

Controls are in place to assure that all products meet specifications and safety requirements.

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