RAD-15C

Rotating Anode X-Ray Tube
Tubes Radiogénes à Anode Tournante
Röntgenröhre mit rotierender Anode
Tubos de Ravos-X con Ánodo Giratorio

Common - Red
Neutre - Rouge
Neutral - Rot
Común - Rojo

Large - Black
Grand - Noir
Gross - Schwarz
Largo - Negro

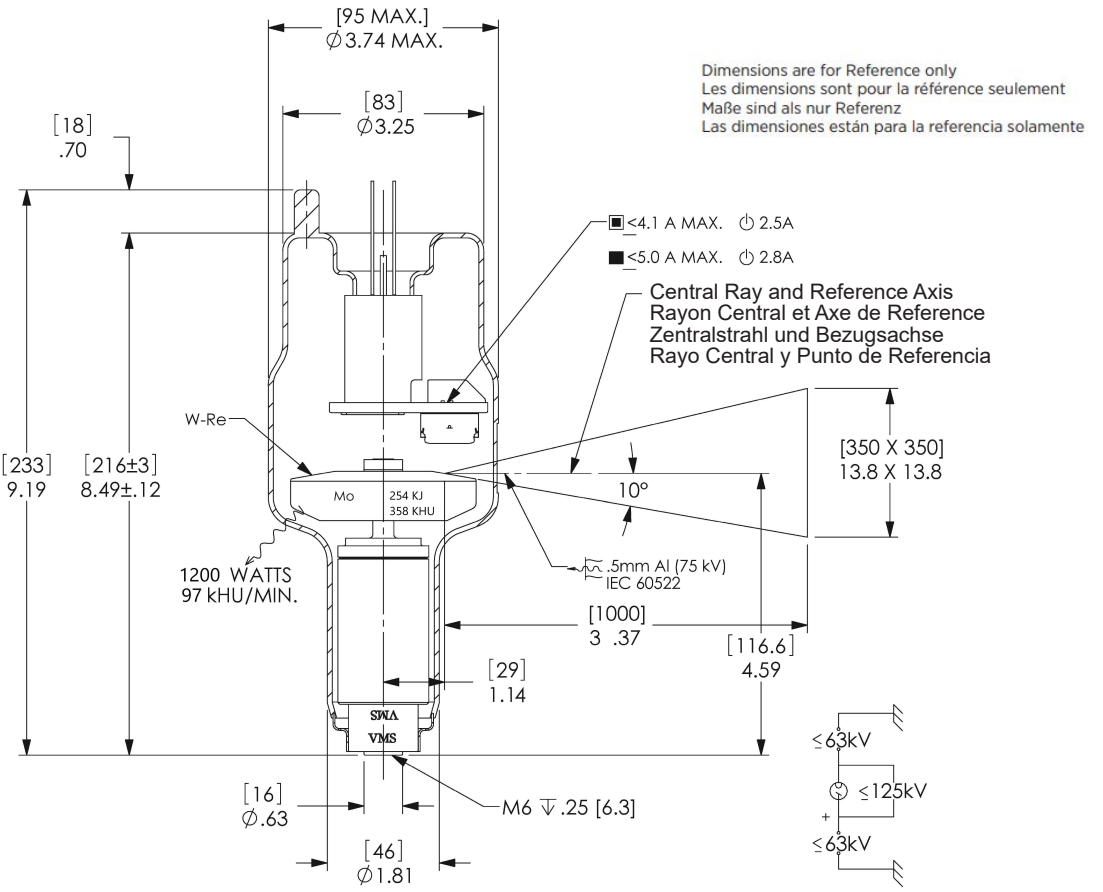
Small -White
Petit - Blanc
Klein - Weiss
Pequeño - Blanco

Stand - By
Attente
Bereitschaft
En Espera

Frame or Chasis
Masse
Chassis
Soporte o Chasis

X-Ray Tube
Tube Radiogène
Röntgenröhre
Tubo de Rayos X

Radiation Filter or Filtration
Filtre de rayonnement
Filterung
Filtración de Radiación



Note: Document originally drafted in the English language.

Product Description

The RAD-15C is a 125 kV, 254 kJ (358 KHU) rotating anode insert specifically designed for mobile surgical C-arm applications. The insert features a 10° tungsten-rhenium facing on molybdenum with a graphite backed target and is available in the following focal spot combinations:

0.3 - 0.6
IEC 60336

Nominal Anode Input Power
Small - 12 kW IEC 60613
Large - 38 kW IEC 60613

For the equivalent anode input power of 120 Watts

Description du Produit

Le RAD-15C est un tube à anode tournante de 125 kV, 254 kJ (358 kUC) spécialement conçu pour les applications chirurgicales mobiles munies d'un support en forme de C. Le pente de l'anode en molybdéne traitée, tungsténe, rhènium, recourte de graphite, est de 10°. La dimension des foyers est de:

0,3 - 0,6
CEI 60336

Puissance anodique nominale de l'anode
Petit foyer - 12 kW CEI 60613
Grand foyer - 38 kW CEI 60613
Pour la puissance anodique d'equilibre thermique de 120 Watts

Produktbeschreibung

Die RAD-15C ist eine Röntgenröhre mit rotierender Anode von 125 kV und 254 kJ (358 kWE). Sie ist besonders geeignet für mobile chirurgische C-Arm Anwendungen. Der rückseitig graphitbeschichtete Wolfram Rhenium-Molybdän Anodenteller besitzt einen Winkel von 10°. Folgende Brennfleck ist lieferbar:

0.3 - 0.6
IEC 60336

Nominale Anodenbezugsleistung
Klein - 12 kW IEC 60613
Gross - 38 kW IEC 60613

Gilt bei einer Aquivalent - Anodenleistung von 120 Watts

Descripcion del Producto

El RAD-15C es un tubo de ánodo giratorio de 125 kV y 254 kJ (358 kUC), diseñado específicamente para uso en brazos movibles de cirugía (Brazos C). El blanco emisor es una combinación de tungsteno, renio y molibdeno con grafito en la parte posterior con un rayo central de 10 grados. Disponible con las siguientes de marcas focales:

0.3 - 0.6
IEC 60336

Potencia nominal de entrada del anodo
Foco fine - 12 kW IEC 60613
Foco grueso - 38 kW IEC 60613

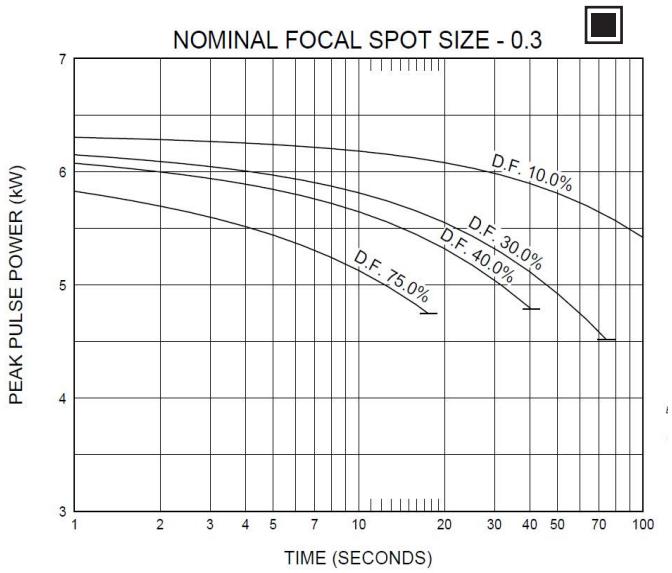
Para una potencia equivalente del anodo de 120 Watts

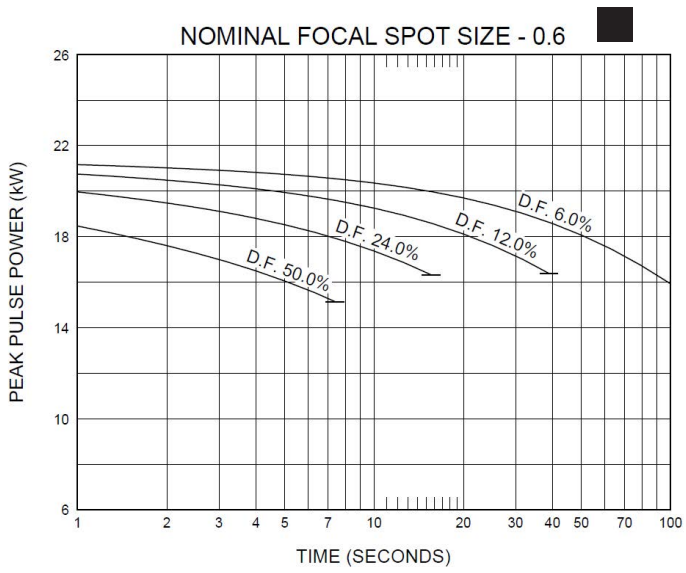
176486 Rev AA 10/2025

Single Load Ratings IEC 60613
Abaques de Chargepour Pose Unique CEI 60613
Brennfleck - Belastungskurven IEC 60613
Diagramas de Exposición Radiográfica IEC 60613

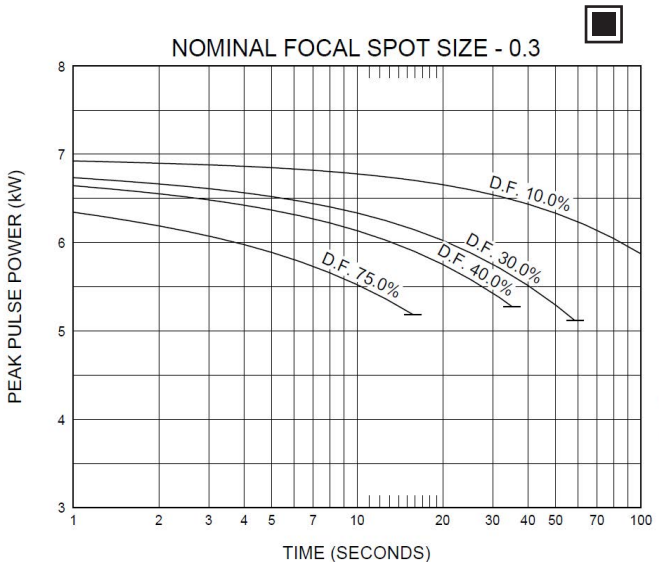
3 Ø Constant Potential ⎓

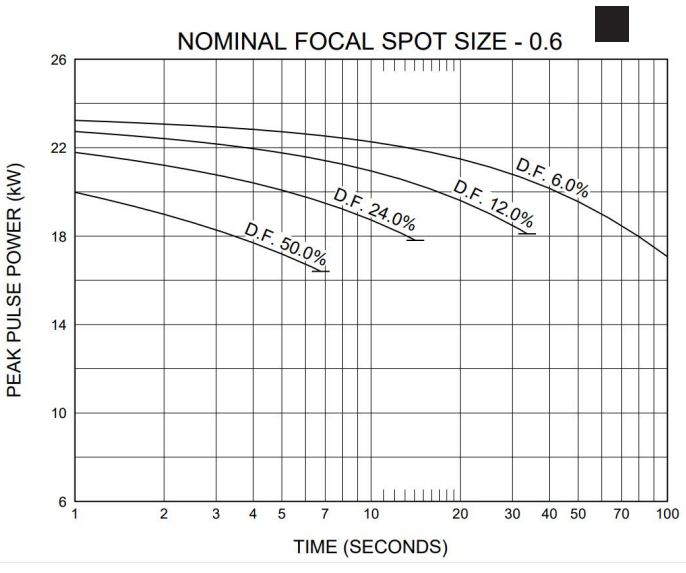
50 HZ - 2,850 RPM





60 HZ - 3,450 RPM





For 1Ø and other applications, please consult the manufacturer.	Pour 1Ø et autre applications, prière de consulter le Fabricant.	Für 1Ø und andere Anwendungen, konsultieren mit dem Fabrikant, bitte.	Para 1Ø y otras aplicaciones, por favor consulte a la Compañia.
Nominal anode input power for the anode heat content 40%. IEC 60613	Puissance calorifique nominale de l'anode: 40%, CEI 60613	Thermische Anodenbezugsleistung bei einer Wärmespeicherung von 40%. IEC 60613	Aproximadamente el poder de penetracion para obtener un almacenaje de calor del anodo de 40%. IEC 60613

Single Load Ratings IEC 60613
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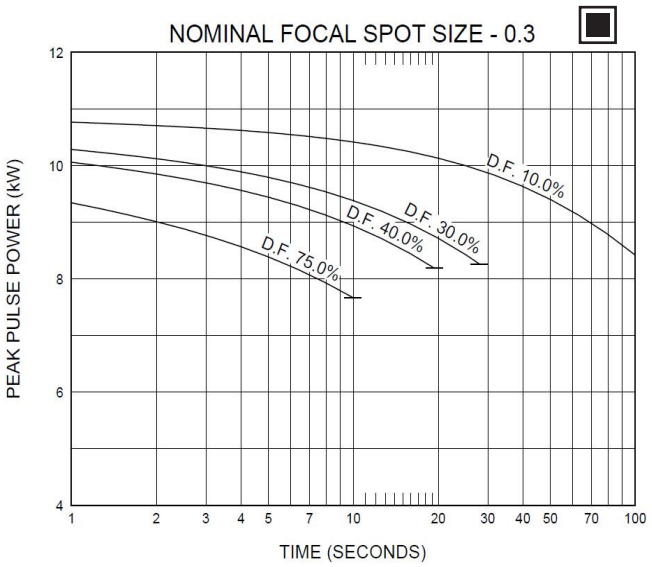
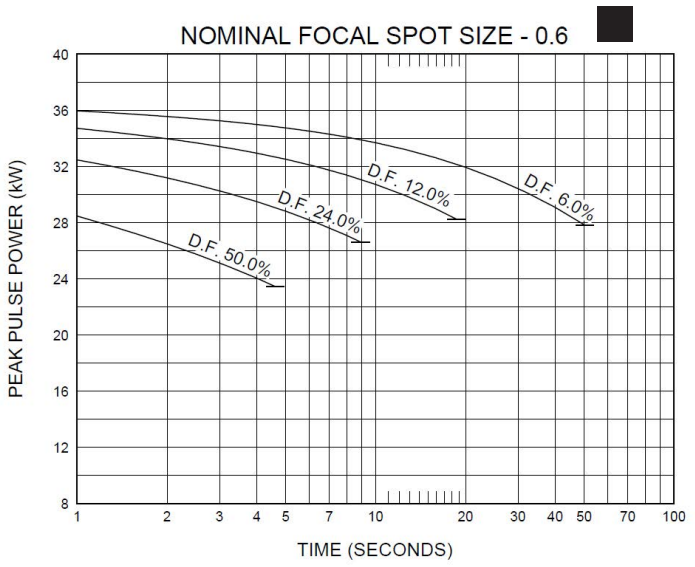
Diagramas de Exposición Radiográfica IEC 60613

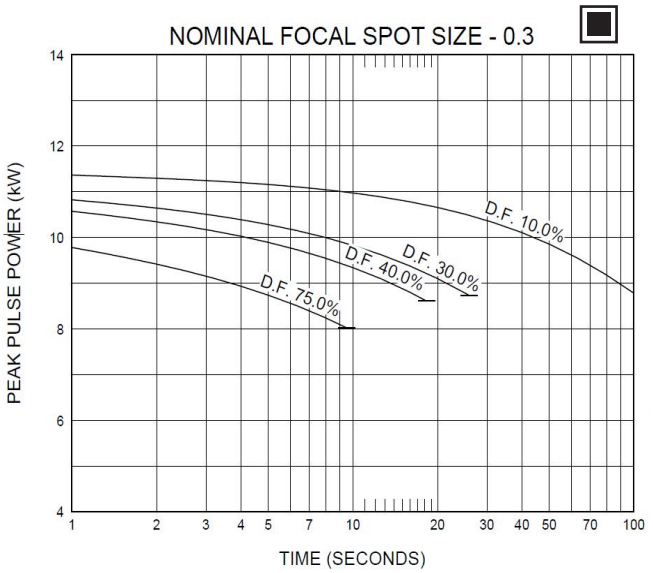
3 Ø Constant Potential ⎓

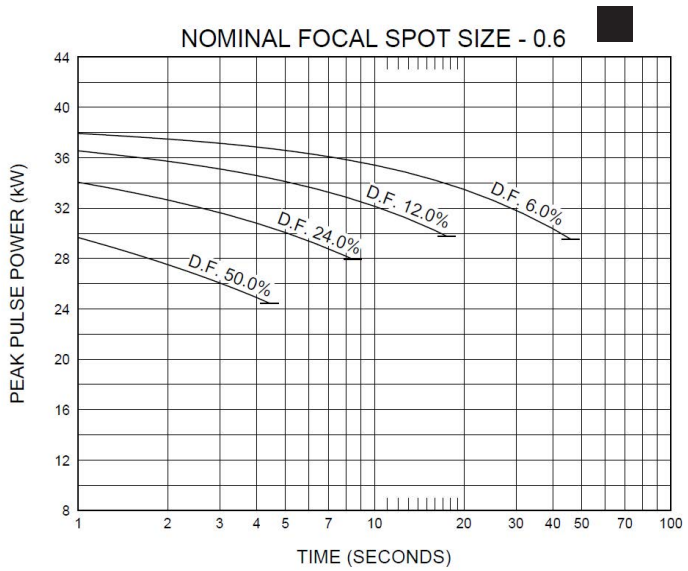
150 HZ - 8,500 RPM





180 HZ - 9,500 RPM





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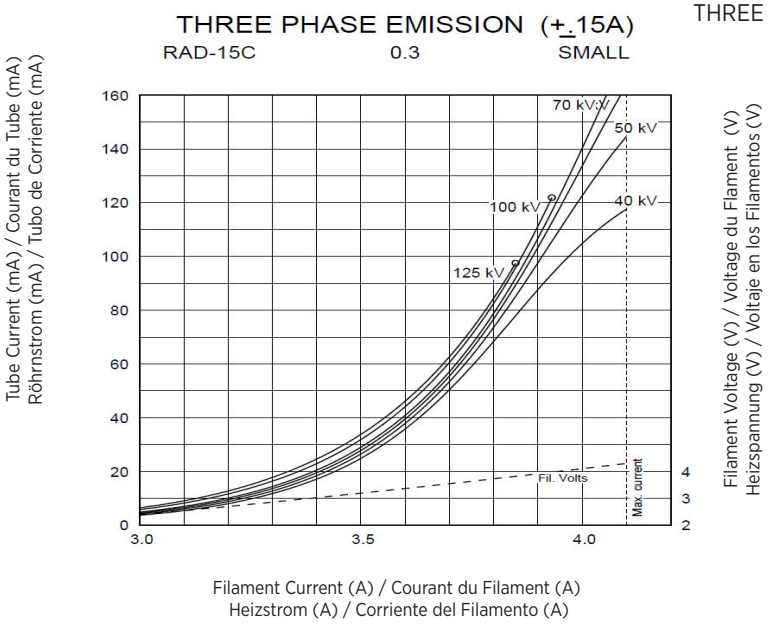
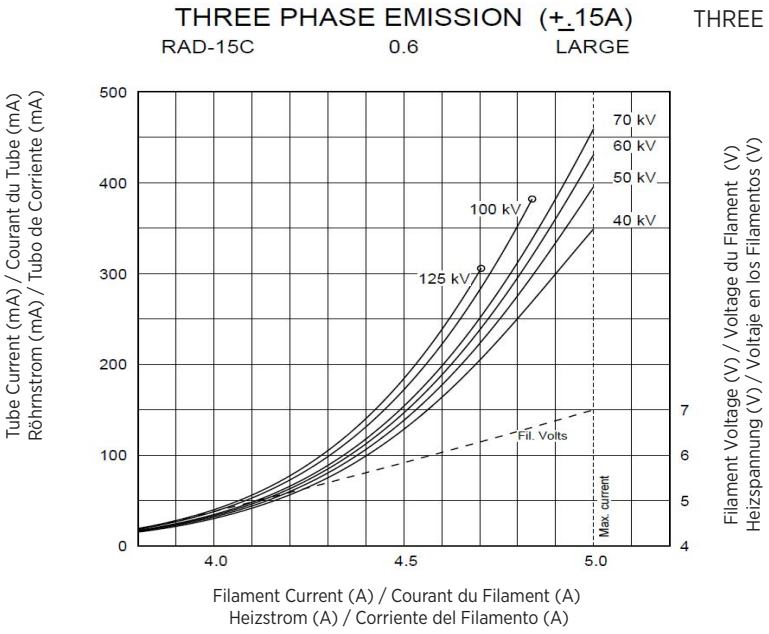
Filament Emission Charts IEC 60613
Abaques d' Émissions des Filaments CEI 60613
Heizfadenemissionsdiagramm IEC 60613
Curvas de Emisión de los Filamentos IEC 60613

3 Ø Constant Potential ⎓



THREE PHASE EMISSION (± .15 A)

0.3 ■



THREE PHASE EMISSION (± .15 A)

0.6 ■

Note:	When using these emission curves for trial exposures, refer to the power rating curves shown for maximum kV, tube emission, filament current, exposure time, and target speed.
Remarque:	Lors de l'utilisation de ces abaques pour des expositions d'essai, référez-vous aux courbes maximales de kV, d'émission du filament, de temps d'exposition et de vitesse de rotation.
Anmerkung:	Wenn Sie diese Emissionskurven füer Testaufnahmen verwenden, beziehen Sie sich hierbei auf die entsprechenden Nennleistungskurven für max. kV-Werte, Röhrenemission, Heizström, und Anodendrehzahl.
Nota:	Si utiliza estas curvas de emisión para exposiciones de prueba, refiérase a las curvas de gradación de potencia para el máximo de kV, tubo de emisión, corriente en los filamentos, tiempo de exposición, y a las curvas de velocidad del objetivo.

CINERADIOGRAPHIC RATINGS

HOW TO USE CINERADIOGRAPHIC CHARTS

General: With the Cineradiographic rating chart we can determine the maximum allowable kW of the Cine pulse, or with a given kW determine maximum time in seconds the Cine run can progress.

The Most common way of using the charts is to determine maximum time of any expected Cine run and maximum duty factor. With a known duty factor and Cine run time kW can easily be determined.

Definition of Terms

Time in seconds: Total time of one Cine run, usually 5 to 12 seconds.

Duty Factor in Percent (DF%): Actual time during one second the x-ray tube is producing x-rays. If we select a 4 msec pulse width and 60 exposures per second the x-ray tube will be producing x-rays for a total of 240 msec each second or 24% of the time. The higher the DF number, the more load placed on the x-ray tube.

Peak Pulse Power: Peak energy in watts of any one Cine Pulse. Can be any combination of kV and mA allowed by Radiographic and Filament Emission curves.

Example: 80 kV at 400 mA equals

80,000 V x 0.4 A = 32,000 W or 32 kW

USING THE CINE RATING CHARTS:

RAD-15 60 Hz 3 Phase 0.6 Focal Spot

Example: Determine maximum kW allowed with the following known factors:

Maximum Pulse Width	4 msec
Exposures per Second	60
Maximum Cine Run Time ...	10 seconds

Calculate Duty Factor: (DF%)

$$DF\% = \frac{\text{Pulse Width (mSec)} \times \text{Frames per Second}}{10}$$

$$DF\% = \frac{4 \text{ msec} \times 60 \text{ exp/sec}}{10} = \frac{240}{10} = 24\%$$

Refer to Rating Chart
RAD-15 60 Hz 3 Phase 0.6 Focal Spot:

At bottom of chart find 10 second line. Move vertically to intersection with 24% DF curve. Make a horizontal reference to left side of rating chart and note kW rating of 19 kW.

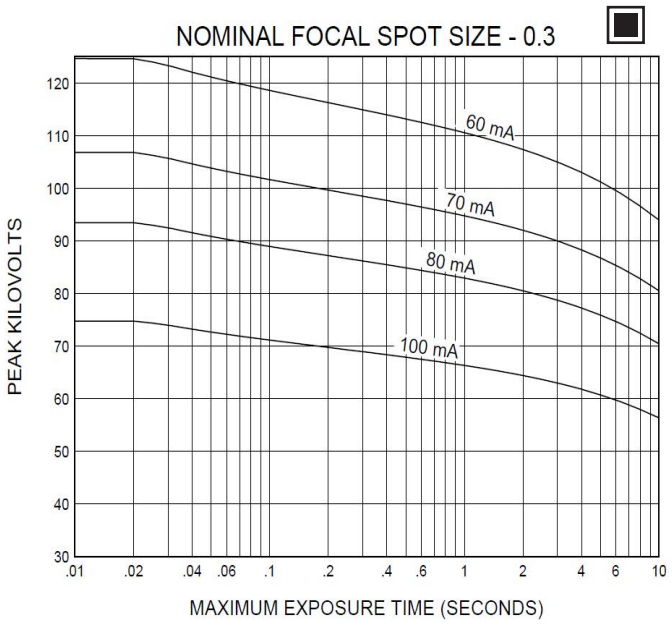
kW = kV x mA. The kW of the exposure can be any combination of mA and kV allowed by the Radiographic and Filament Emission Charts.

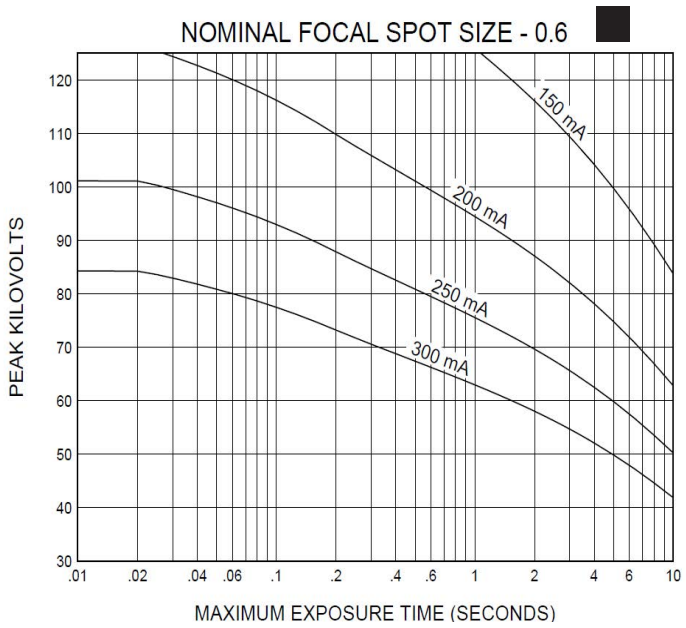
The Cine rating charts are usable to 100% anode heat storage. Exceeding 100% anode heat storage will cause anode track erosion with high risk of tube destruction.

Cineradiographic Exposure Charts IEC 60613
Abaques de Radiocinéma CEI 60613
Belastungskurven für den Kinobrtrieb IEC 60613
Diagramas de Exposición Cineradiográfica IEC 60613

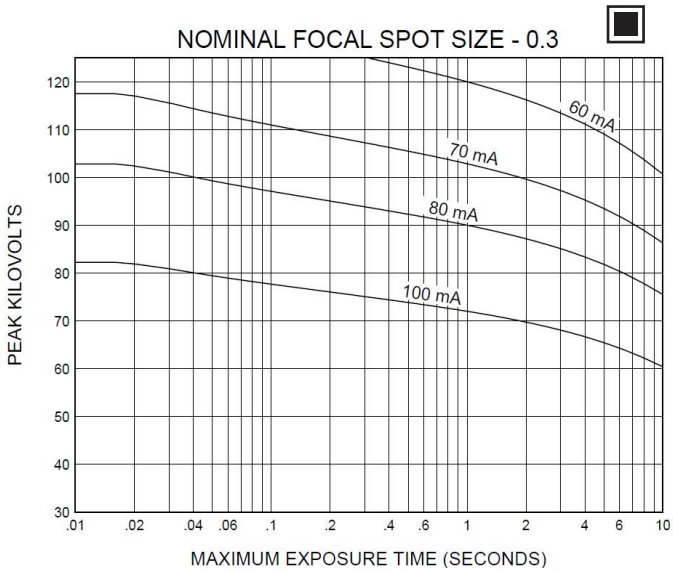
3 Ø Constant Potential ⎓

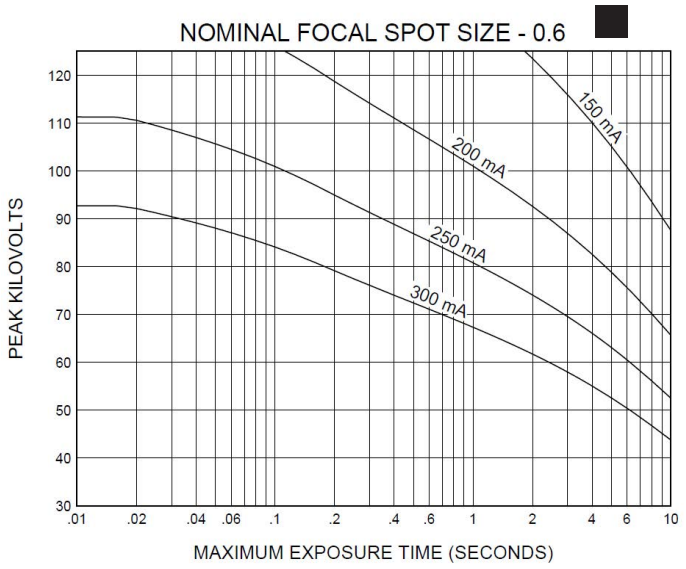
50 Hz





60 Hz





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Cineradiographic Exposure Charts IEC 60613
Abaques de Radiocinéma CEI 60613
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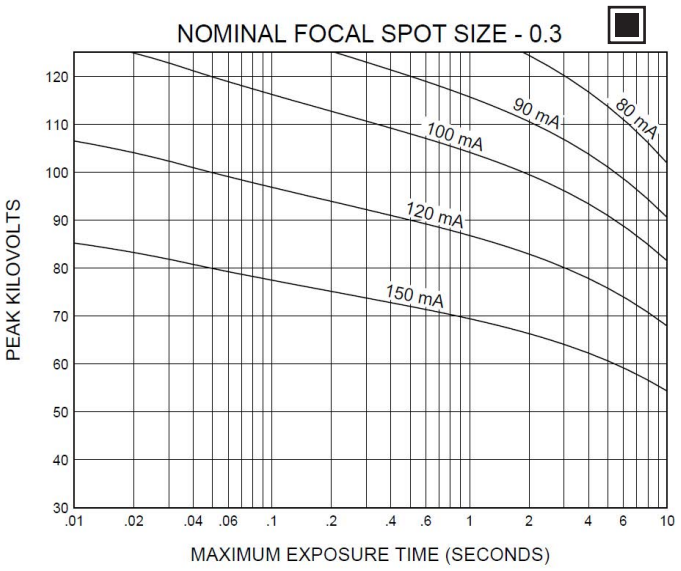
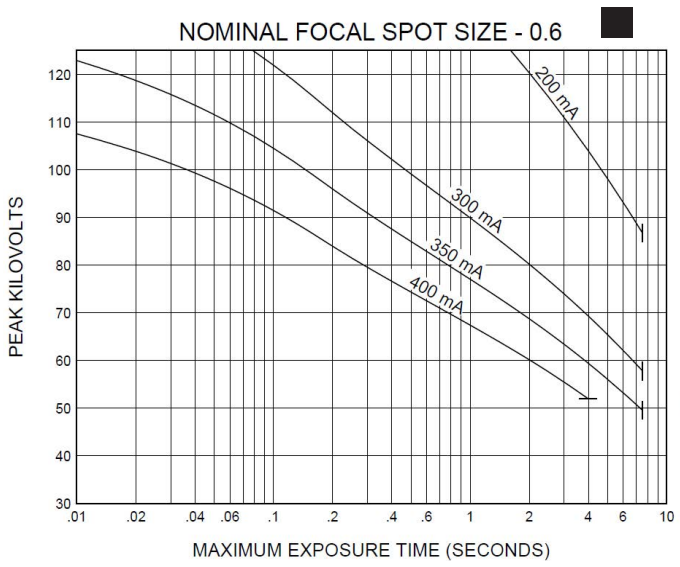
Diagramas de Exposición Cineradiográfica IEC 60613

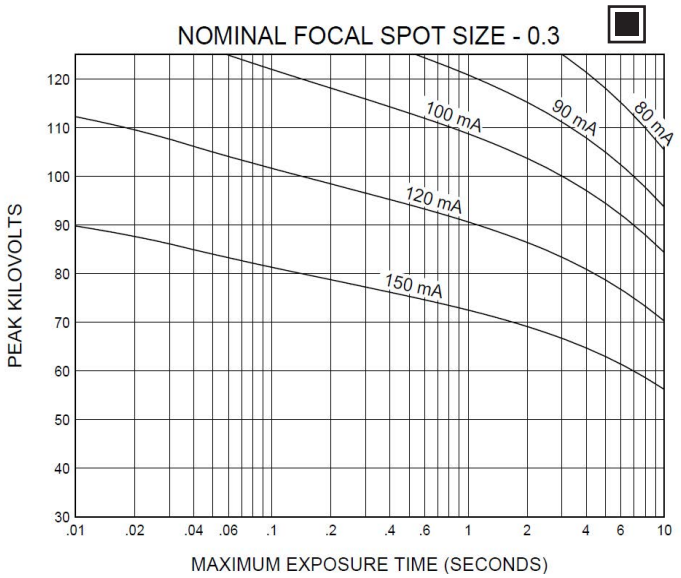
3 Ø Constant Potential ⎓

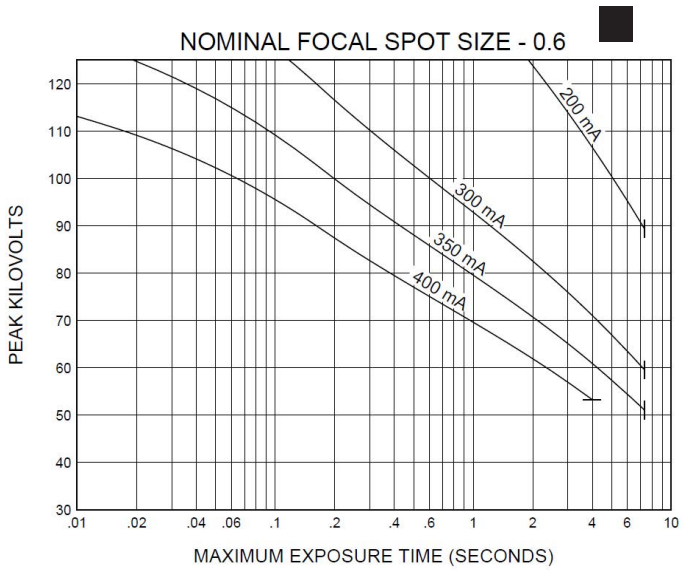
150 Hz





180 Hz





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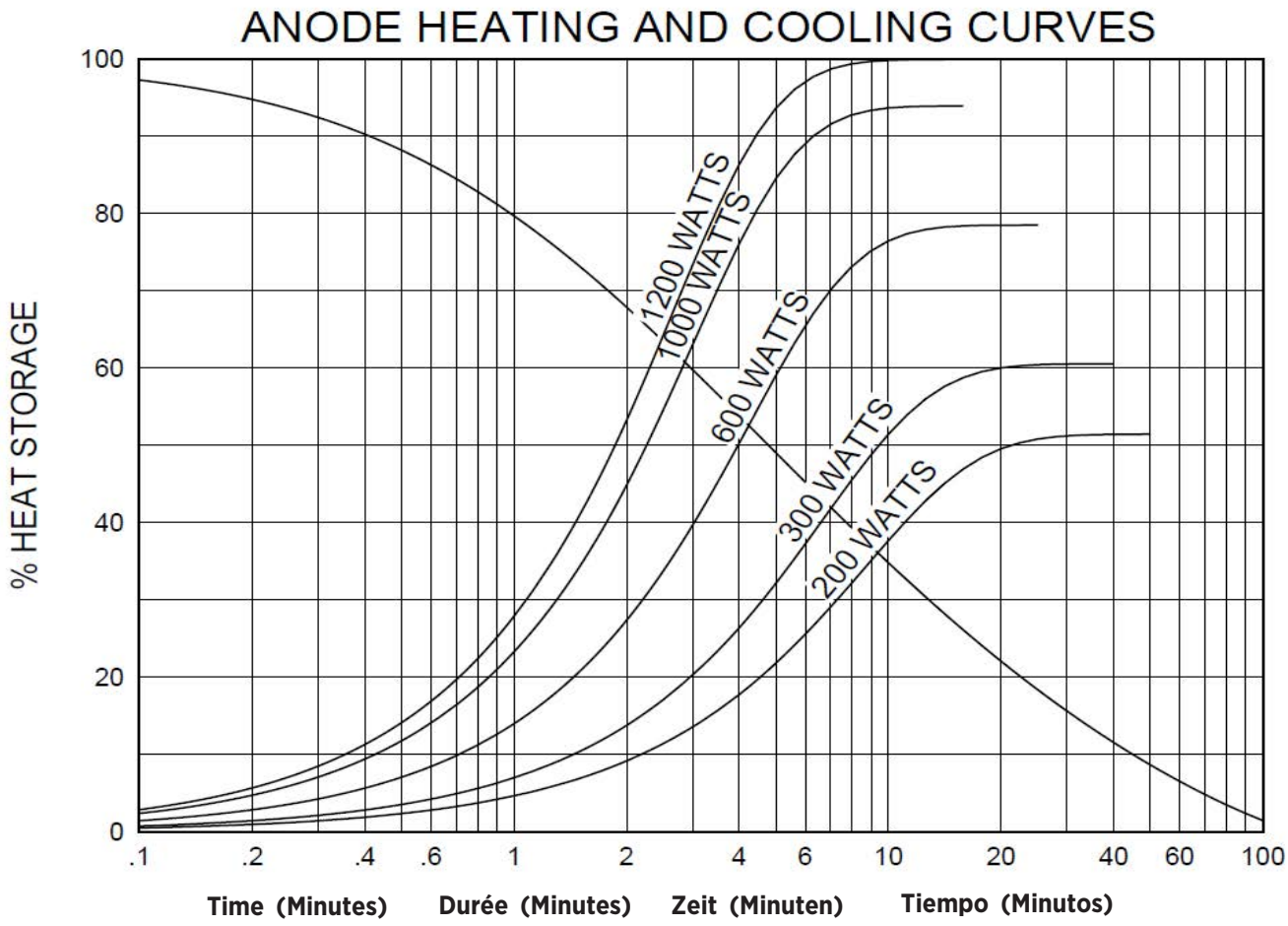
Anode Heating & Cooling Chart
Abaques d' Échauffement et de Refroidissement de L'Anode
Anoden Aufheiz - und Abkühl Kurven
Curvas de Calentamiento y Enfriamiento del Anodo



Salt Lake City, UT 1-801-972-5000

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Fabricado por Varex Imaging Corporation

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