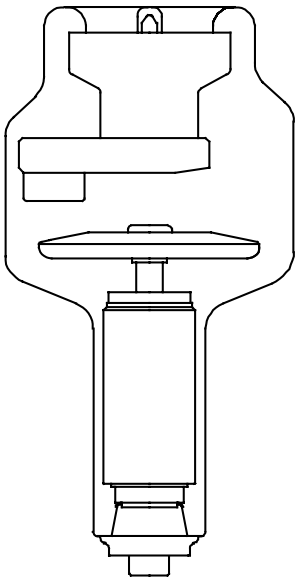
Documentazione Tubo a raggi X
Tube Documentation
Documentation du Tube

X50 H 1.2/2.0



Nr. di matricola Tube No. Nr de série

CE 0051

Questa documentazione deve essere fornita all'utilizzatore del complesso tubo-guaina
The contents of this documentation must be transmitted to the user of the tube-assembly
Le contenu de cette documentation doit être transmis à l'utilisateur de la gaine équipée

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CSQ ISO 9001 IQNet CSQ ISO 13485

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Dichiarazione di conformità

Questo prodotto soddisfa i requisiti essenziali del regolamento UE 2017/745 in accordo alle norme IEC 60613, IEC 60336, IEC 60522, IEC 60526, IEC 60601-1, IEC 60601-1-3, IEC 60601-2-28.

Declaration of conformity

This tube fulfils the essential requirements of the regulation EU 2017/745 according to standard IEC 60613, IEC 60336, IEC 60522, IEC 60526, IEC 60601-1, IEC 60601-1-3, IEC 60601-2-28.

Confirmation de conformité

Ce tube remplit les exigences essentielles de le règlement UE 2017/745 en accord avec les normes IEC 60613, IEC 60336, IEC 60522, IEC 60526, IEC 60601-1, IEC 60601-1-3, IEC 60601-2-28.

Caratteristiche - Specifications - Spécifications

Macchie focali Focal spot Foyer	▣ 1.2 ■ 2.0		IEC 60336
Velocità di rotazione dell'anodo Anode speed Vitesse de l'anode	50 / 60 Hz 2850 / 3450 min^{-1}		
Potenza anodica nominale Nominal anode input power Puissance anodique nominale	▣ 30 kW ■ 50 kW		IEC 60613 (1989)
Potenza anodica nominale in radiografia Nominal radiographic anode input power Puissance anodique radiographique nominale	▣ 31.5 kW ■ 51.0 kW		IEC 60613 (2010)
Diametro anodico Anode diameter Diamètre de l'anode	90 mm		
Materiale anodico Anode material Matériau de l'anode	RT-TZM *		
* RT = Tungsteno + Renio (5-10%) , TZM = Molibdeno + Titanio (0.40-0.55 %) + Zirconio (0.06-0.12 %) RT = Tungsten + Rhenium (5-10%) , TZM = Molibdenum + Titanium (0.40-0.55 %) + Zirconium (0.06-0.12 %) RT = Tungstène + Rhénium (5-10%) , TZM = Molybdène + Titane (0.40-0.55 %) + Zirconium (0.06-0.12 %)			
Angolo anodico Anode angle Pente de l'anode	16 °		
Campo di radiazione Radiation field Champ de rayonnement	a 70 cm 38 cm a 100 cm 55 cm		
Filtrazione permanente Permanent filtration Filtration permanent	0.7 mm Al / 75 kV		IEC 60522
Capacità termica anodica Maximum anode heat content Chaleur maximale accumulée dans l'anode	105 kJ	140 kHU	IEC 60613 (1989)
Dissipazione termica continua Continuous heat dissipation Dissipation thermique continue	440 W	35 200 HU/min	
Dissipazione termica massima Maximum heat dissipation Dissipation thermique maximale	800 W	64 000 HU/min	
Alta tensione nominale Nominal X-ray tube voltage Haute tension nominale	150 kV		IEC 60613 (2010)
Massima corrente di filamento Max. filament current Courant dans le filament max.	5.4 A		

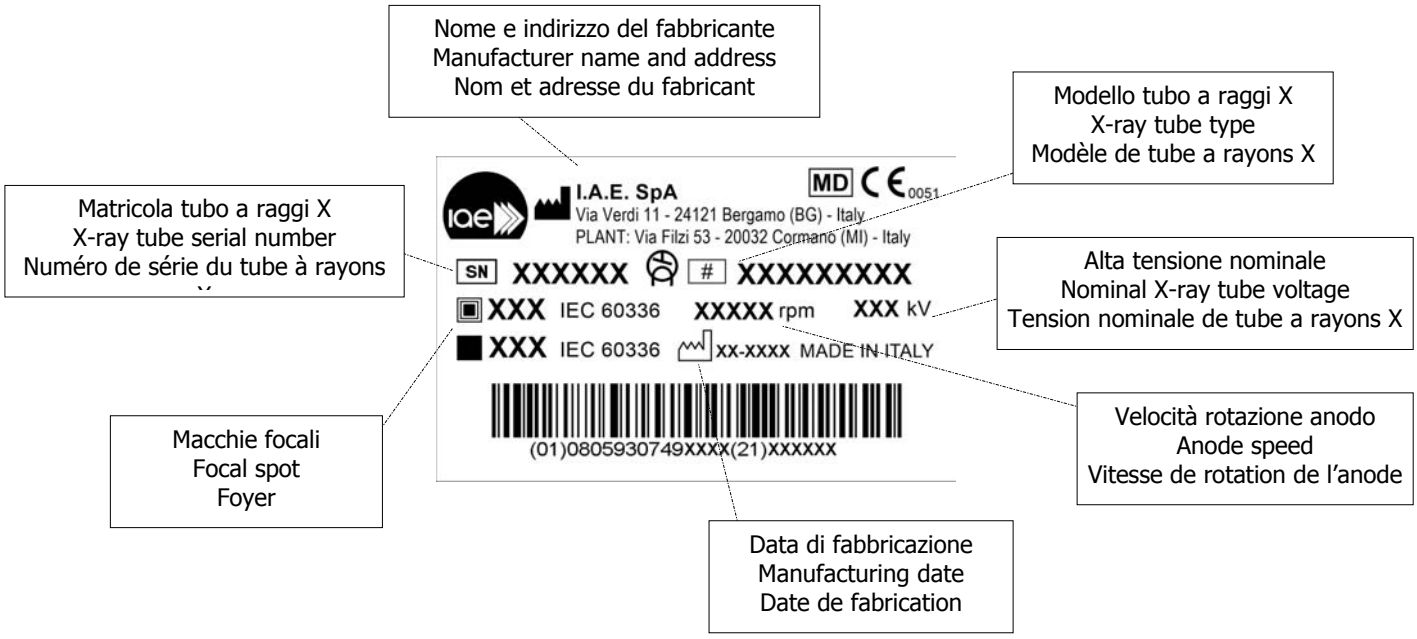
I dati forniti nella presente documentazione si intendono riferiti a:
The data indicated in this documentation refer to:
Les données indiquées dans cette documentation sont calculés pour:

Potenza anodica di equilibrio termico Equivalent anode input power Puissance anodique d'équilibre thermique	100 W	=	% della capacità termica anodica % of maximum anode heat content % de chaleur max. accumulée dans l'anode	47%

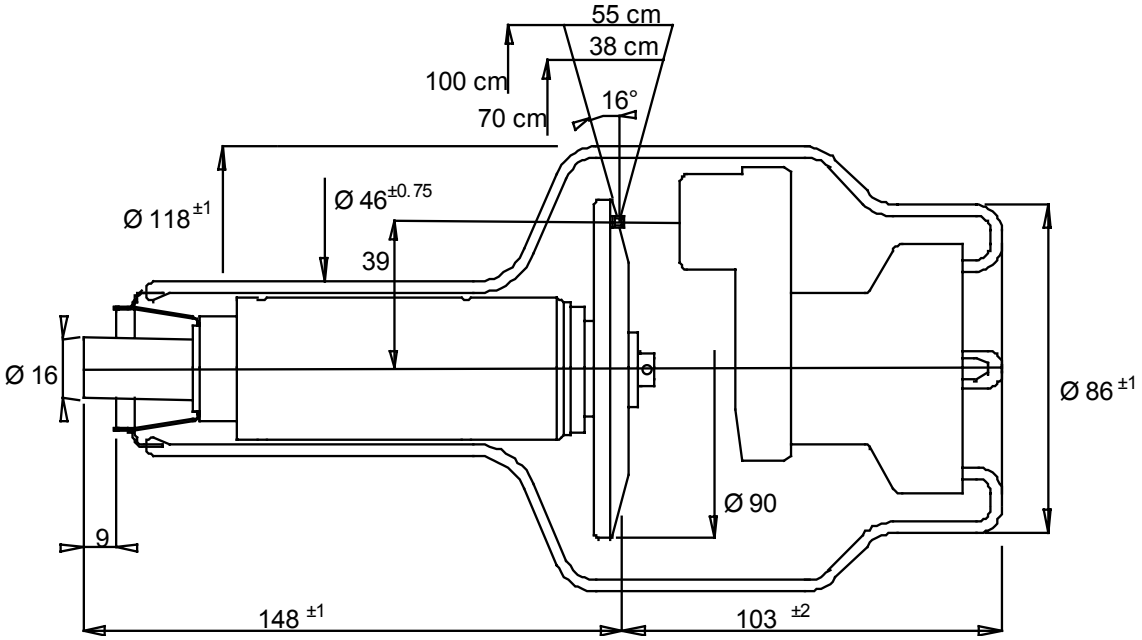
	trasporto e stoccaggio transportation and storage transport et stockage	funzionamento operation opération	
Limiti di temperatura Temperature limits Limites de température	-10°C ÷ +80°C	+10°C ÷ +40°C	
Limiti di umidità Humidity limits Limites d'humidité	max. 80%	max. 75%	
Limiti di pressione Pressure limits Limites de pression	500 ÷ 1060 hPa	700 ÷ 1060 hPa	

Etichettatura - Labeling - Etiquetage

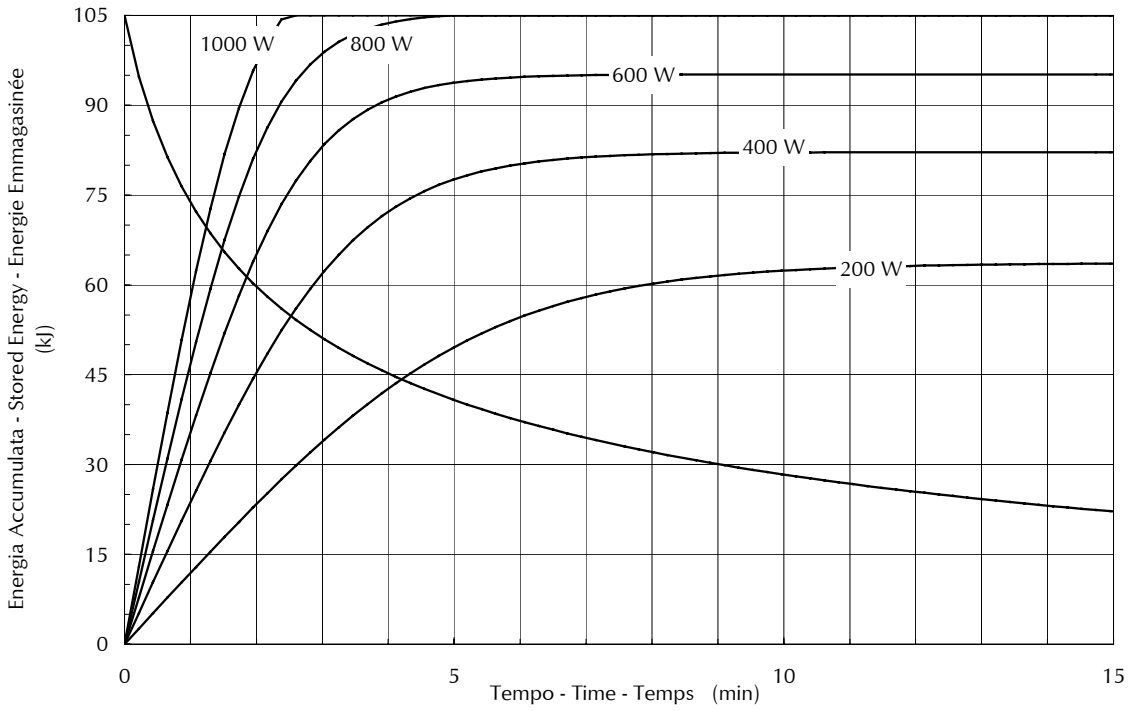
Etichetta del tubo / Tube label / Etiquette de tube



Dimensioni - Dimension - Dimensions

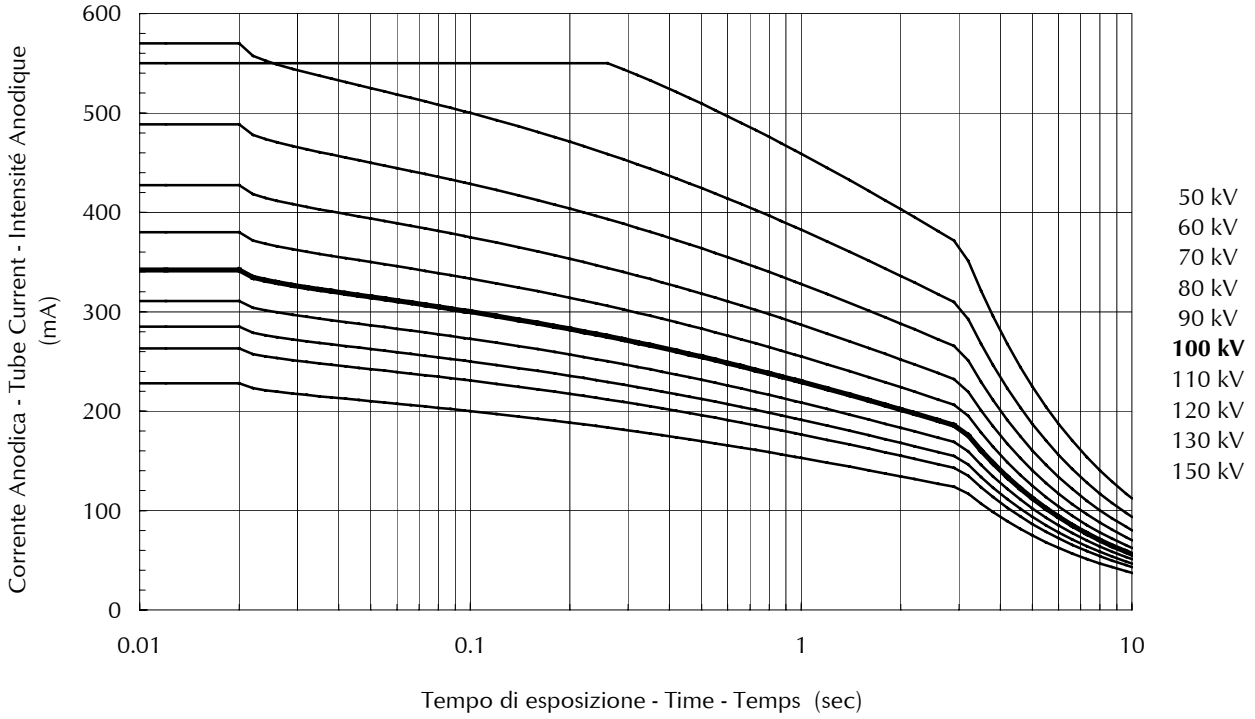


Curve di riscaldamento e raffreddamento dell'anodo
Anode heating and cooling curves
Courbes d'échauffement et de refroidissement de l'anode
IEC 60613 (1989)



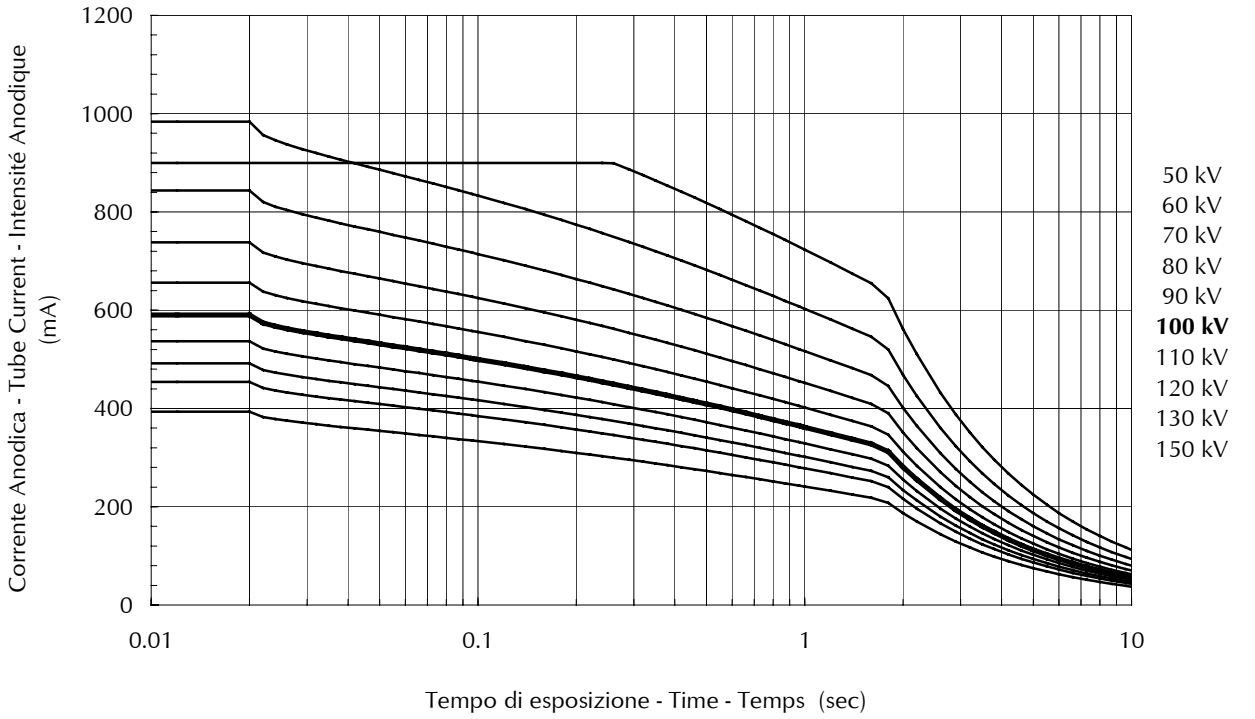
CURVE DI CARICO SINGOLO - SINGLE LOAD RATING - ABAQUE DE CHARGE UNIQUE

▣ 1.2 - 3 Ø - 50 / 60 Hz - IEC 60613 (1989) (2010)



CURVE DI CARICO SINGOLO - SINGLE LOAD RATING - ABAQUE DE CHARGE UNIQUE

■ 2.0 - 3 Ø - 50 / 60 Hz - IEC 60613 (1989) (2010)



Abaco per carichi in serie - Serial load rating - Abaque de charges successives

1.2 - 3 Ø - 50 / 60 Hz

Potenza ammessa sul tubo in kW, per serie di n esposizioni, con frequenza z e durata di ogni esposizione in sec
Anode input power as a function of n (N° of exposures in series), z (exp. rate per sec), the exposure time (sec)
Puissance anodique en fonction de n (N° d'exp. de la séries), z (cadence d'exp. par sec), temps d'exposition (sec)

z	0.010	0.020	0.030	0.040	0.050	0.060	0.080	0.100	0.120	0.140	0.160	0.180	0.200	0.220	0.250	n
1	26.8	26.8	26.1	25.6	25.2	24.9	24.4	24.0	23.7	23.4	23.1	22.8	22.4	22.0	21.4	
2	26.5	26.5	26.1	25.6	25.2	24.9	24.3	23.7	23.0	22.5	21.9	21.4	20.9	20.4	19.7	
3	26.4	26.4	25.9	25.4	25.0	24.6	23.7	23.0	22.3	21.6	21.0	20.4	19.8	19.3	18.5	
4	26.2	26.2	25.7	25.2	24.7	24.2	23.3	22.4	21.7	20.9	20.2	19.6	19.0	18.4	17.7	5
5	26.1	26.1	25.5	24.9	24.4	23.9	22.9	22.0	21.1	20.4	19.7	19.0	18.4	-	-	
10	26.1	25.6	24.8	24.1	23.4	22.7	21.5	20.4	-	-	-	-	-	-	-	
15	26.1	25.3	24.3	23.5	22.7	21.9	-	-	-	-	-	-	-	-	-	
30	25.9	24.6	23.4	-	-	-	-	-	-	-	-	-	-	-	-	
1	26.5	26.5	26.1	25.6	25.2	24.9	24.3	23.7	23.0	22.4	21.9	21.4	20.8	20.4	19.1	
2	26.2	26.2	25.7	25.1	24.6	24.2	23.3	22.4	21.6	20.9	20.2	19.6	19.0	18.4	17.6	
3	26.1	26.0	25.3	24.7	24.1	23.5	22.5	21.5	20.7	19.8	19.1	18.4	17.8	17.2	16.3	
4	26.1	25.8	25.0	24.3	23.7	23.0	21.9	20.9	19.9	19.0	18.3	17.5	16.9	16.2	15.4	10
5	26.1	25.6	24.8	24.0	23.3	22.6	21.4	20.3	19.3	18.4	17.6	16.8	16.1	-	-	
10	26.1	24.9	23.9	22.9	22.0	21.1	19.7	18.4	-	-	-	-	-	-	-	
15	25.8	24.4	23.2	22.1	21.1	20.1	-	-	-	-	-	-	-	-	-	
30	25.3	23.5	21.9	-	-	-	-	-	-	-	-	-	-	-	-	
1	26.2	26.2	25.7	25.1	24.6	24.2	23.2	22.4	21.1	18.1	15.9	14.1	12.7	11.5	10.2	
2	26.1	25.7	25.0	24.3	23.7	23.0	21.9	20.8	19.9	17.1	15.0	13.3	12.0	10.9	9.6	
3	26.1	25.4	24.5	23.7	23.0	22.2	20.9	19.8	18.7	16.7	14.6	13.0	11.7	10.7	9.4	
4	26.1	25.1	24.2	23.3	22.4	21.6	20.2	19.0	17.9	16.6	14.5	12.9	11.6	10.5	9.3	20
5	26.1	24.9	23.8	22.8	21.9	21.1	19.6	18.3	17.2	16.2	14.4	12.8	11.5	-	-	
10	25.6	24.0	22.6	21.4	20.3	19.3	17.6	16.1	-	-	-	-	-	-	-	
15	25.2	23.4	21.8	20.4	19.2	18.1	-	-	-	-	-	-	-	-	-	
30	24.4	22.1	20.1	-	-	-	-	-	-	-	-	-	-	-	-	
1	26.1	25.7	25.0	24.3	23.7	23.0	17.7	14.1	11.8	10.1	8.8	7.9	7.1	6.4	5.7	
2	26.1	25.1	24.2	23.2	22.4	21.1	15.9	12.7	10.6	9.1	7.9	7.0	6.3	5.8	5.1	
3	26.0	24.7	23.5	22.5	21.5	20.3	15.3	12.2	10.2	8.7	7.6	6.8	6.1	5.5	4.9	
4	25.7	24.3	23.0	21.9	20.8	19.9	15.0	12.0	10.0	8.5	7.5	6.6	6.0	5.4	4.8	40
5	25.6	24.0	22.6	21.4	20.3	19.3	14.8	11.8	9.8	8.4	7.4	6.6	5.9	-	-	
10	24.9	22.8	21.1	19.6	18.3	17.2	14.4	11.5	-	-	-	-	-	-	-	
15	24.4	22.0	20.1	18.4	17.1	15.9	-	-	-	-	-	-	-	-	-	
30	23.4	20.4	18.1	-	-	-	-	-	-	-	-	-	-	-	-	
1	26.1	25.4	24.5	23.7	20.8	17.3	13.0	10.4	8.7	7.4	6.5	5.8	5.2	4.7	4.2	
2	26.0	24.7	23.5	22.4	17.9	14.9	11.2	8.9	7.5	6.4	5.6	5.0	4.5	4.1	3.6	
3	25.7	24.2	22.8	21.1	16.9	14.1	10.6	8.5	7.0	6.0	5.3	4.7	4.2	3.8	3.4	
4	25.4	23.7	22.2	20.5	16.4	13.7	10.3	8.2	6.8	5.9	5.1	4.6	4.1	3.7	3.3	60
5	25.2	23.4	21.8	20.2	16.1	13.5	10.1	8.1	6.7	5.8	5.0	4.5	4.0	-	-	
10	24.4	22.0	20.1	18.4	15.6	13.0	9.7	7.8	-	-	-	-	-	-	-	
15	23.8	21.1	18.9	17.2	15.4	12.8	-	-	-	-	-	-	-	-	-	
30	22.6	19.3	16.8	-	-	-	-	-	-	-	-	-	-	-	-	
1	26.1	25.1	24.2	21.3	17.1	14.2	10.7	8.5	7.1	6.1	5.3	4.7	4.3	3.9	3.4	
2	25.7	24.3	23.0	17.7	14.1	11.8	8.8	7.1	5.9	5.1	4.4	3.9	3.5	3.2	2.8	
3	25.4	23.7	22.0	16.5	13.2	11.0	8.2	6.6	5.5	4.7	4.1	3.7	3.3	3.0	2.6	
4	25.1	23.2	21.1	15.9	12.7	10.6	7.9	6.3	5.3	4.5	4.0	3.5	3.2	2.9	2.5	80
5	24.9	22.8	20.7	15.5	12.4	10.3	7.7	6.2	5.2	4.4	3.9	3.4	3.1	-	-	
10	24.0	21.4	19.3	14.8	11.8	9.8	7.4	5.9	-	-	-	-	-	-	-	
15	23.4	20.4	18.1	14.5	11.6	9.7	-	-	-	-	-	-	-	-	-	
30	22.0	18.4	15.9	-	-	-	-	-	-	-	-	-	-	-	-	
1	26.1	24.9	23.8	18.5	14.8	12.3	9.3	7.4	6.2	5.3	4.6	4.1	3.7	3.4	3.0	
2	25.6	24.0	19.8	14.9	11.9	9.9	7.4	5.9	5.0	4.2	3.7	3.3	3.0	2.7	2.4	
3	25.2	23.4	18.2	13.7	10.9	9.1	6.8	5.5	4.6	3.9	3.4	3.0	2.7	2.5	2.2	
4	24.9	22.8	17.4	13.1	10.4	8.7	6.5	5.2	4.4	3.7	3.3	2.9	2.6	2.4	2.1	100
5	24.6	22.4	16.9	12.7	10.2	8.5	6.3	5.1	4.2	3.6	3.2	2.8	2.5	-	-	
10	23.7	20.8	15.9	12.0	9.6	8.0	6.0	4.8	-	-	-	-	-	-	-	
15	23.0	19.8	15.6	11.7	9.4	7.8	-	-	-	-	-	-	-	-	-	
30	21.5	17.8	15.1	-	-	-	-	-	-	-	-	-	-	-	-	
1	25.8	24.4	19.7	14.8	11.8	9.8	7.4	5.9	4.9	4.2	3.7	3.3	3.0	2.7	2.4	
2	22.2	22.2	14.8	11.1	8.9	7.4	5.6	4.4	3.7	3.2	2.8	2.5	2.2	2.0	1.8	
3	19.8	19.8	13.2	9.9	7.9	6.6	5.0	4.0	3.3	2.8	2.5	2.2	2.0	1.8	1.6	
4	18.6	18.6	12.4	9.3	7.4	6.2	4.7	3.7	3.1	2.7	2.3	2.1	1.9	1.7	1.5	150
5	17.9	17.9	11.9	8.9	7.2	6.0	4.5	3.6	3.0	2.6	2.2	2.0	1.8	-	-	
10	16.4	16.4	11.0	8.2	6.6	5.5	4.1	3.3	-	-	-	-	-	-	-	
15	15.9	15.9	10.6	8.0	6.4	5.3	-	-	-	-	-	-	-	-	-	
30	15.5	15.5	10.3	-	-	-	-	-	-	-	-	-	-	-	-	
1	22.0	22.0	14.7	11.0	8.8	7.3	5.5	4.4	3.7	3.1	2.8	2.4	2.2	2.0	1.8	
2	14.8	14.8	9.8	7.4	5.9	4.9	3.7	3.0	2.5	2.1	1.8	1.6	1.5	1.3	1.2	
3	12.3	12.3	8.2	6.2	4.9	4.1	3.1	2.5	2.1	1.8	1.5	1.4	1.2	1.1	1.0	
4	11.1	11.1	7.4	5.6	4.4	3.7	2.8	2.2	1.9	1.6	1.4	1.2	1.1	1.0	0.9	300
5	10.4	10.4	6.9	5.2	4.2	3.5	2.6	2.1	1.7	1.5	1.3	1.2	1.0	-	-	
10	8.9	8.9	6.0	4.5	3.6	3.0	2.2	1.8	-	-	-	-	-	-	-	
15	8.5	8.5	5.6	4.2	3.4	2.8	-	-	-	-	-	-	-	-	-	
30	8.0	8.0	5.3	-	-	-	-	-	-	-	-	-	-	-	-	

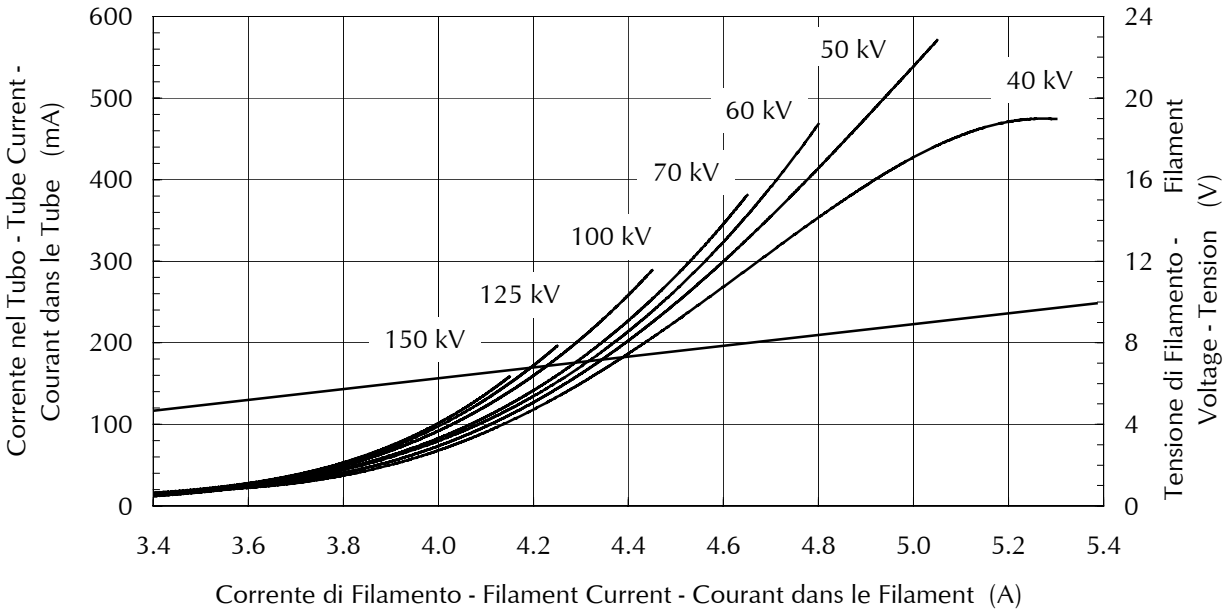
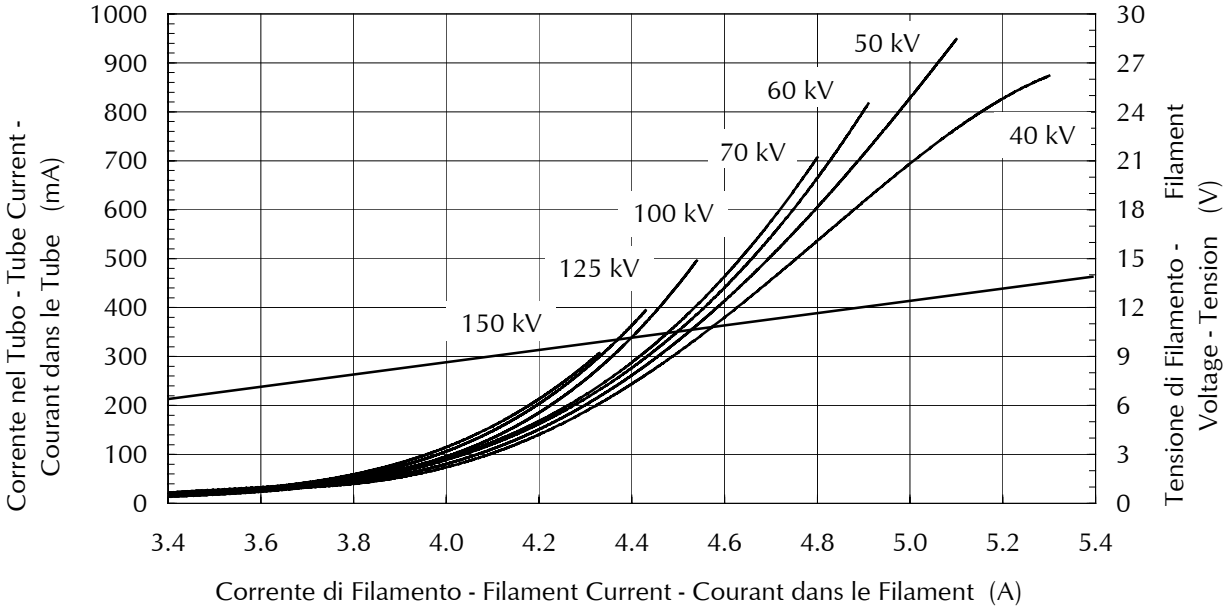
Abaco per carichi in serie - Serial load rating - Abaque de charges successives

■ 2.0 - 3 Ø - 50 / 60 Hz

Potenza ammessa sul tubo in kW, per serie di n esposizioni, con frequenza z e durata di ogni esposizione in sec
Anode input power as a function of n (N° of exposures in series), z (exp. rate per sec), the exposure time (sec)
Puissance anodique en fonction de n (N° d'exp. de la séries), z (cadence d'exp. par sec), temps d'exposition (sec)

z	0.010	0.020	0.030	0.040	0.050	0.060	0.080	0.100	0.120	0.140	0.160	0.180	0.200	0.220	0.250	n
1	45.9	45.9	44.4	43.3	42.5	41.9	40.8	40.0	39.3	38.7	38.1	37.6	36.7	36.0	34.8	
2	45.4	45.4	44.4	43.3	42.5	41.9	40.7	39.3	38.0	36.8	35.7	34.7	33.7	32.7	31.4	
3	45.0	45.0	44.0	43.0	42.1	41.2	39.5	37.9	36.5	35.1	33.9	32.7	31.7	30.6	29.2	
4	44.7	44.7	43.5	42.4	41.4	40.4	38.5	36.8	35.2	33.8	32.5	31.3	30.1	29.1	27.6	5
5	44.4	44.4	43.1	41.9	40.8	39.7	37.7	35.9	34.2	32.7	31.4	30.1	28.9	-	-	
10	44.4	43.4	41.7	40.1	38.7	37.3	34.9	32.7	-	-	-	-	-	-	-	
15	44.4	42.7	40.7	38.9	37.2	35.7	-	-	-	-	-	-	-	-	-	
30	44.0	41.2	38.7	-	-	-	-	-	-	-	-	-	-	-	-	
1	45.4	45.4	44.4	43.3	42.5	41.9	40.7	39.3	38.0	34.2	29.9	26.6	23.9	21.7	19.1	
2	44.7	44.7	43.5	42.4	41.3	40.3	38.5	36.7	35.2	33.1	29.0	25.8	23.2	21.1	18.6	
3	44.4	44.1	42.8	41.4	40.2	39.1	36.9	35.0	33.3	31.7	28.7	25.5	23.0	20.9	18.4	
4	44.4	43.7	42.1	40.7	39.3	38.0	35.7	33.7	31.8	30.2	28.5	25.4	22.8	20.8	18.3	10
5	44.4	43.3	41.6	40.0	38.6	37.2	34.7	32.6	30.7	29.0	27.5	25.3	22.8	-	-	
10	44.4	41.9	39.7	37.7	35.9	34.2	31.4	28.9	-	-	-	-	-	-	-	
15	43.8	40.9	38.4	36.1	34.1	32.3	-	-	-	-	-	-	-	-	-	
30	42.7	38.9	35.7	-	-	-	-	-	-	-	-	-	-	-	-	
1	44.7	44.7	43.5	42.4	41.3	40.3	31.7	25.4	21.1	18.1	15.9	14.1	12.7	11.5	10.2	
2	44.4	43.7	42.1	40.7	39.3	38.0	29.9	23.9	19.9	17.1	15.0	13.3	12.0	10.9	9.6	
3	44.4	43.0	41.1	39.4	37.9	36.4	29.3	23.4	19.5	16.7	14.6	13.0	11.7	10.7	9.4	
4	44.4	42.4	40.3	38.5	36.7	35.2	29.0	23.2	19.3	16.6	14.5	12.9	11.6	10.5	9.3	20
5	44.4	41.9	39.6	37.6	35.8	34.2	28.8	23.0	19.2	16.5	14.4	12.8	11.5	-	-	
10	43.3	40.0	37.2	34.7	32.6	30.7	27.5	22.8	-	-	-	-	-	-	-	
15	42.6	38.7	35.5	32.8	30.5	28.5	-	-	-	-	-	-	-	-	-	
30	40.9	36.1	32.3	-	-	-	-	-	-	-	-	-	-	-	-	
1	44.4	43.7	42.1	35.4	28.3	23.6	17.7	14.1	11.8	10.1	8.8	7.9	7.1	6.4	5.7	
2	44.4	42.4	40.3	31.7	25.4	21.1	15.9	12.7	10.6	9.1	7.9	7.0	6.3	5.8	5.1	
3	44.1	41.4	39.0	30.5	24.4	20.3	15.3	12.2	10.2	8.7	7.6	6.8	6.1	5.5	4.9	
4	43.7	40.7	38.0	29.9	23.9	19.9	15.0	12.0	10.0	8.5	7.5	6.6	6.0	5.4	4.8	40
5	43.3	40.0	37.2	29.5	23.6	19.7	14.8	11.8	9.8	8.4	7.4	6.6	5.9	-	-	
10	41.9	37.6	34.2	28.8	23.0	19.2	14.4	11.5	-	-	-	-	-	-	-	
15	40.9	36.0	32.2	28.6	22.9	19.0	-	-	-	-	-	-	-	-	-	
30	38.7	32.8	28.5	-	-	-	-	-	-	-	-	-	-	-	-	
1	44.4	43.0	34.7	26.0	20.8	17.3	13.0	10.4	8.7	7.4	6.5	5.8	5.2	4.7	4.2	
2	44.1	41.4	29.8	22.4	17.9	14.9	11.2	8.9	7.5	6.4	5.6	5.0	4.5	4.1	3.6	
3	43.5	40.3	28.2	21.1	16.9	14.1	10.6	8.5	7.0	6.0	5.3	4.7	4.2	3.8	3.4	
4	43.0	39.4	27.4	20.5	16.4	13.7	10.3	8.2	6.8	5.9	5.1	4.6	4.1	3.7	3.3	60
5	42.5	38.7	26.9	20.2	16.1	13.5	10.1	8.1	6.7	5.8	5.0	4.5	4.0	-	-	
10	40.8	36.0	25.9	19.5	15.6	13.0	9.7	7.8	-	-	-	-	-	-	-	
15	39.6	34.2	25.6	19.2	15.4	12.8	-	-	-	-	-	-	-	-	-	
30	37.2	30.7	25.3	-	-	-	-	-	-	-	-	-	-	-	-	
1	44.4	42.4	28.4	21.3	17.1	14.2	10.7	8.5	7.1	6.1	5.3	4.7	4.3	3.9	3.4	
2	43.7	35.4	23.6	17.7	14.1	11.8	8.8	7.1	5.9	5.1	4.4	3.9	3.5	3.2	2.8	
3	43.0	32.9	22.0	16.5	13.2	11.0	8.2	6.6	5.5	4.7	4.1	3.7	3.3	3.0	2.6	
4	42.4	31.7	21.1	15.9	12.7	10.6	7.9	6.3	5.3	4.5	4.0	3.5	3.2	2.9	2.5	80
5	41.9	31.0	20.7	15.5	12.4	10.3	7.7	6.2	5.2	4.4	3.9	3.4	3.1	-	-	
10	40.0	29.5	19.7	14.8	11.8	9.8	7.4	5.9	-	-	-	-	-	-	-	
15	38.7	29.1	19.4	14.5	11.6	9.7	-	-	-	-	-	-	-	-	-	
30	36.0	28.6	19.0	-	-	-	-	-	-	-	-	-	-	-	-	
1	44.4	37.0	24.7	18.5	14.8	12.3	9.3	7.4	6.2	5.3	4.6	4.1	3.7	3.4	3.0	
2	43.3	29.7	19.8	14.9	11.9	9.9	7.4	5.9	5.0	4.2	3.7	3.3	3.0	2.7	2.4	
3	42.5	27.3	18.2	13.7	10.9	9.1	6.8	5.5	4.6	3.9	3.4	3.0	2.7	2.5	2.2	
4	41.9	26.1	17.4	13.1	10.4	8.7	6.5	5.2	4.4	3.7	3.3	2.9	2.6	2.4	2.1	100
5	41.3	25.4	16.9	12.7	10.2	8.5	6.3	5.1	4.2	3.6	3.2	2.8	2.5	-	-	
10	39.3	23.9	15.9	12.0	9.6	8.0	6.0	4.8	-	-	-	-	-	-	-	
15	37.9	23.4	15.6	11.7	9.4	7.8	-	-	-	-	-	-	-	-	-	
30	35.0	23.0	15.3	-	-	-	-	-	-	-	-	-	-	-	-	
1	43.8	29.5	19.7	14.8	11.8	9.8	7.4	5.9	4.9	4.2	3.7	3.3	3.0	2.7	2.4	
2	42.5	22.2	14.8	11.1	8.9	7.4	5.6	4.4	3.7	3.2	2.8	2.5	2.2	2.0	1.8	
3	39.7	19.8	13.2	9.9	7.9	6.6	5.0	4.0	3.3	2.8	2.5	2.2	2.0	1.8	1.6	
4	37.2	18.6	12.4	9.3	7.4	6.2	4.7	3.7	3.1	2.7	2.3	2.1	1.9	1.7	1.5	150
5	35.8	17.9	11.9	8.9	7.2	6.0	4.5	3.6	3.0	2.6	2.2	2.0	1.8	-	-	
10	32.9	16.4	11.0	8.2	6.6	5.5	4.1	3.3	-	-	-	-	-	-	-	
15	31.9	15.9	10.6	8.0	6.4	5.3	-	-	-	-	-	-	-	-	-	
30	30.9	15.5	10.3	-	-	-	-	-	-	-	-	-	-	-	-	
1	42.5	22.0	14.7	11.0	8.8	7.3	5.5	4.4	3.7	3.1	2.8	2.4	2.2	2.0	1.8	
2	29.5	14.8	9.8	7.4	5.9	4.9	3.7	3.0	2.5	2.1	1.8	1.6	1.5	1.3	1.2	
3	24.7	12.3	8.2	6.2	4.9	4.1	3.1	2.5	2.1	1.8	1.5	1.4	1.2	1.1	1.0	
4	22.2	11.1	7.4	5.6	4.4	3.7	2.8	2.2	1.9	1.6	1.4	1.2	1.1	1.0	0.9	300
5	20.8	10.4	6.9	5.2	4.2	3.5	2.6	2.1	1.7	1.5	1.3	1.2	1.0	-	-	
10	17.9	8.9	6.0	4.5	3.6	3.0	2.2	1.8	-	-	-	-	-	-	-	
15	16.9	8.5	5.6	4.2	3.4	2.8	-	-	-	-	-	-	-	-	-	
30	15.9	8.0	5.3	-	-	-	-	-	-	-	-	-	-	-	-	

Caratteristica di emissione del catodo
Cathode emission characteristic
Caractéristique d'émission de la cathode
▣ 1.2 - 3 Ø - (± 0.2 A) – IEC 60613 (1989) (2010)



Caratteristica di emissione del catodo
Cathode emission characteristic
Caractéristique d'émission de la cathode
■ 2.0 - 3 Ø - (± 0.2 A) – IEC 60613 (1989) (2010)