PHILIPS

TAL 12/10
TAW 12/10

TRIODE for use as H.F. and L.F. amplifier and oscillator
TRIODE pour utilisation comme amplificatrice H.F. et B.F. et oscillatrice
TRIODE zur Verwendung als H.F. und N.F. Verstärker und Oszillator

		TAL 12/10	TAW 12/10
Cooling	:	forced air	water
Refroidissement	:	à air forcée	eau
Kühlung	:	erzwungene Luftkühlung	Wasser

Filament : tungsten, two-phase
Filament : tungstène, biphasé
Heizfaden: Wolfram, zwei Phasen

Heating	: direct	per phase	V_f = 22 V [1]
Chauffage	: direct	par phase	I_f = 39 A
Heizung	: direkt	pro Phase	

Starting current must never exceed 78 A per phase
Le courant de démarrage ne doit jamais excéder 78 A par phase
Der Anlaufstrom darf unter keinen Umständen höher sein als 78 A pro Phase

Capacitances	C_a = 4 pF
Capacités	C_g = 24,8 pF
Kapazitäten	C_{ag} = 22 pF

Typical characteristics	μ	= 22
Caractéristiques typiques	S (I_a=0,5 A)	= 7 mA/V
Kenndaten	I_{sat}	= 8 A

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[1]) Each tube is marked with the value of the filament voltage at which the saturation current has a value of 8 A
La valeur de tension du filament correspondante à un courant de saturation de 8 A est indiquée à chaque tube
Auf jede Röhre ist der Wert der Heizspannung angegeben wobei der Sättigungsstrom einen Wert von 8 A erhält

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λ	Freq.	C telegr.		B teleph.		C an.mod.		B mod. [1]	
m	Mc/s	Va (kV)	Wo (kW)	Va (kV)	Wo (kW)	Va (kV)	Wo (kW)	Va (kV)	Wo (kW)
>60	< 5	12	10,5			10	7,7	12	17
>15	<20	10	10,5	8	2	8	6	10	16,6
				6	2			8	16,2

Limiting values
Caractéristiques limites
Grenzdaten

V_a = max. 12 kV
W_a = max. 4 kW
W_g = max. 300 W
R_g = max. 10 kΩ

q (t_i=20 °C, W_a= 4 kW) = min. 5,4 m^3/min
t_i = max. 45 °C
t_{anode} = max. 150 °C

temperature of bulb and seals)
température de l'ampoule et des points de scellement) = max. 150 °C
Temperatur des Kolbens und der Verschlüsse)

Pressure loss
Perte de pression
Druckverlust

p_i (q =5,4 m^3/min, t_i= 20 °C) = 117 mm H_2O

Mounting position: exactly vertical with anode down
Montage : exactement vertical avec l'anode en bas
Aufstellung : genau senkrecht mit der Anode unten

Filament bracket
Etriers des filaments
Heizfadenbügel — 40604

Protective cap for grid seals
Chapeau de protection pour les sorties de la grille
Schutzkappe für Gitterverschlüsse — 40632

[1]) Two valves; deux tubes; zwei Röhren

λ	Freq.	C telegr.		B teleph.		C an.mod.		B mod. [1]	
m	Mc/s	Va (kV)	Wo (kW)	Va (kV)	Wo (kW)	Va (kV)	Wo (kW)	Va (kV)	Wo (kW)
>60	< 5	12	15	12	3,7	10	7,7	12	30
>15	<20	10	12	10	3,3	8	6	10	25
6	50	6,5	6,5					8	19,5
4	75	4	3,5						

Limiting values
Caractéristiques limites
Grenzdaten

V_a = max. 12 kV
W_a = max. 7,5 kW
W_g = max. 300 W
R_g = max. 10 kΩ

t_o = max. 50 °C
$t_o - t_i$ = max. 11 °C
q (W_a=7,5 kW) = min. 12 l/min

temperature of bulb and seals)
température de l'ampoule et des)
points de scellement) = max. 150 °C
Temperatur des Kolbens und der)
Verschlüsse)

Pressure loss
Perte de pression
Druckverlust

p_i (q=12 l/min) = 0,3 atm

Mounting position: exactly vertical with anode down
Montage : exactement vertical avec l'anode en bas
Aufstellung : genau senkrecht mit der Anode unten

Filament bracket
Etriers des filaments
Heizfadenbügel

40604

Protective cap for grid seals
Chapeau de protection pour les sorties de la grille
Schutzkappe für Gitterverschlüsse

40632

[1]) Two valves; deux tubes; zwei Röhren

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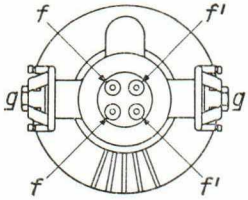
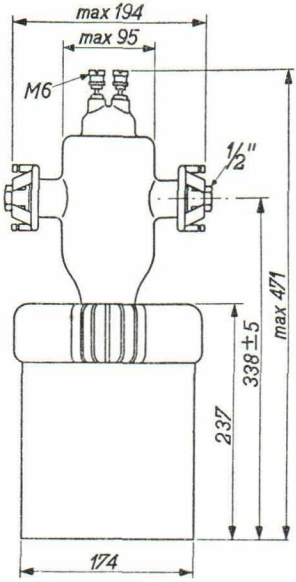
Dimensions in mm
Dimensions en mm
Abmessungen in mm





Supporting ring
Poignée
Tragring 40603

Foot Pied Fuss	K 501	or ou oder	Insulating collar Support isolant Isolierhalter	40629

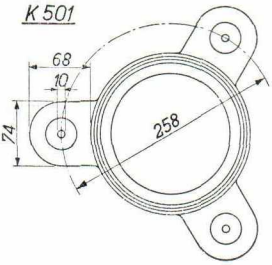
Net weight
Poids net
Nettogewicht 13,5 kg

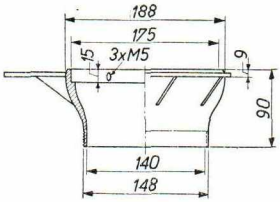
Shipping weight
Poids brut
Bruttogewicht 33 kg

Dimensions in mm ; Dimensions en mm ; Abmessungen in mm

59696

K 501





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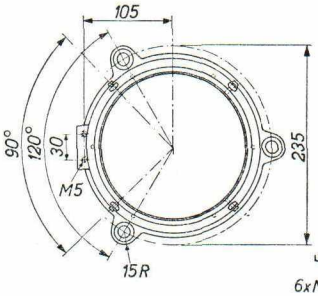

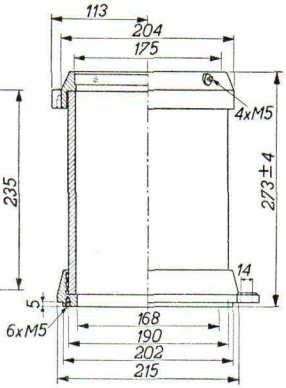

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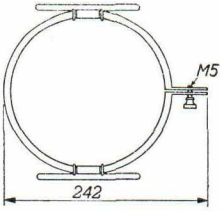
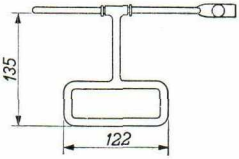
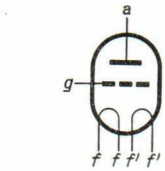


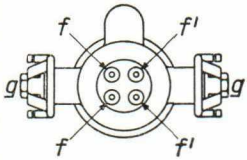


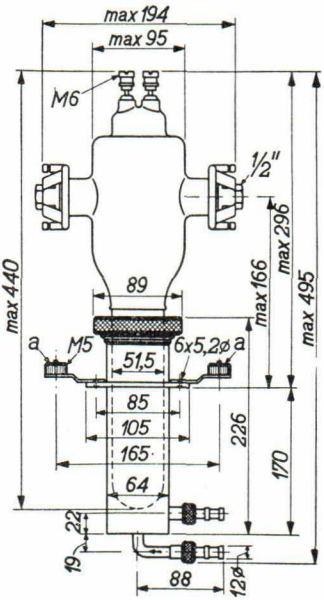
PHILIPS

Valve mounted in water-jacket type K 700
Tube monté dans le réfrigérant type K 700
Röhre in Kühltopf Typ K 700 montiert

Dimensions in mm
Dimensions en mm
Abmessungen in mm







Net weight of the valve Poids net du tube Netto Röhrengewicht	2 kg
Shipping weight of the valve Poids brut du tube Brutto Röhrengewicht	8 kg
Net weight of the water-jacket Poids net du réfrigérant Nettogewicht des Kühltopfes	2,1 kg

Operating conditions H.F. class C telegraphy
Caractéristiques d'utilisation H.F. classe C télégraphie
Betriebsdaten H.F. Klasse C Telegraphie

λ	=	>60	>15	m
V_a	=	12	10	kV
V_g	=	-700	-600	V
I_a	=	1,21	1,45	A
I_g	=	0,28	0,26	A
V_{gp}	=	1100	1050	V
W_{ig}	=	280	250	W
W_{ia}	=	14,5	14,5	kW
W_a	=	4	4	kW
W_o	=	10,5	10,5	kW
η	=	72,5	72,5	%

Operating conditions H.F. class B telephony
Caractéristiques d'utilisation H.F. classe B téléphonie
Betriebsdaten H.F. Klasse B Telephonie

λ	=	> 60	>15	m
V_a	=	8	6	kV
V_g	=	-300	-190	V
I_a	=	0,75	1	A
V_{gp}	=	325	315	V
W_{ia}	=	6	6	kW
W_a	=	4	4	kW
W_o	=	2	2	kW
η	=	33	33	%
m	=	100	100	%
I_g	=	0,26	0,35	A
W_{ig}	=	155	200	W

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Operating conditions H.F. class C anode modulation
Caractéristiques d'utilisation H.F. classe C modulation d'anode
Betriebsdaten H.F. Klasse C Anodenmodulation

λ	=	>60	>15	m
V_a	=	10	8	kV
V_g	=	-800	-700	V
I_a	=	1	1	A
I_g	=	0,44	0,33	A
V_{gp}	=	1200	1150	V
W_{ig}	=	475	345	W
W_{ia}	=	10	8	kW
W_a	=	2,3	2	kW
W_o	=	7,7	6	kW
η	=	77	75	%
m	=	100	100	%
W_{mod}	=	5	4	kW

Operating conditions as L.F. class B amplifier and modulator, two valves
Caractéristiques d'utilisation comme amplificatrice et modulatrice B.F. classe B, deux tubes
Betriebsdaten als N.F. Verstärker und Modulator Klasse B, zwei Röhren

V_a	=	12		10		8		kV
V_g	=	-450		-350		-265		V
R_{aa}	=	16		10		7,12		kΩ
V_{ggp}	=	0	1520	0	1350	0	1300	V
I_a	=	2x0,32	2x0,94	2x0,38	2x1,14	2x0,4	2x1,42	A
I_g	=	0	2x0,14	0	2x0,14	0	2x0,27	A
W_{ig}	=	0	2x96	0	2x86	0	2x158	W
W_{ia}	=	2x3,84	2x11,3	2x3,8	2x11,4	2x3,2	2x11,4	kW
W_a	=	2x3,84	2x2,8	2x3,8	2x3,1	2x3,2	2x3,3	kW
W_o	=	0	17	0	16,6	0	16,2	kW
dtot	=	-	5	-	5	-	5	%
η	=	-	75	-	73	-	71	%

Operating conditions H.F. class C telegraphy
Caractéristiques d'utilisation H.F. classe C télégraphie
Betriebsdaten H.F. Klasse C Telegraphie

λ	=	>60	>15	6	4	m
V_a	=	12	10	6,5	4	kV
V_g	=	-700	-600	-460	-350	V
I_a	=	1,7	1,7	1,7	1,7	A
I_g	=	0,35	0,28	0,19	0,16	A
V_{gp}	=	1100	1070	885	775	V
W_{ig}	=	350	270	150	115	W
W_{ia}	=	20,4	17	11	6,8	kW
W_a	=	5,4	5	4,5	3,3	kW
W_o	=	15	12	6,5	3,5	kW
η	=	73,5	70,5	59	51,5	%

Operating conditions H.F. class B telephony
Caractéristiques d'utilisation H.F. classe B téléphonie
Betriebsdaten H.F. Klasse B Telephonie

λ	=	>60	>15	m
V_a	=	12	10	kV
V_g	=	-435	-360	V
I_a	=	0,93	1	A
V_{gp}	=	285	245	V
W_{ia}	=	11,2	10	kW
W_a	=	7,5	6,7	kW
W_o	=	3,7	3,3	kW
η	=	33	33	%
m	=	100	100	%
I_g	=	0,35	0,35	A
W_{ig}	=	180	155	W

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Operating conditions H.F. class C anode modulation
Caractéristiques d'utilisation H.F. classe C modulation d'anode
Betriebsdaten H.F. Klasse C Anodenmodulation

λ	=	>60	>15	m
V_a	=	10	8	kV
V_g	=	-800	-700	V
I_a	=	1	1	A
I_g	=	0,44	0,33	A
V_{gp}	=	1200	1150	V
W_{ig}	=	475	345	W
W_{ia}	=	10	8	kW
W_a	=	2,3	2	kW
W_o	=	7,7	6	kW
η	=	77	75	%
m	=	100	100	%
W_{mod}	=	5	4	kW

Operating conditions as L.F. class B amplifier and modulator, two valves
Caractéristiques d'utilisation comme amplificatrice et modulatrice B.F. classe B, deux tubes
Betriebsdaten als N.F. Verstärker und Modulator Klasse B, zwei Röhren

V_a	=	12		10		8		kV
V_g	=	-415		-350		-260		V
R_{aa}	=	8,32		5,6		5,4		kΩ
V_{ggp}	=	0	1720	0	1560	0	1400	V
I_a	=	2x0,55	2x1,7	2x0,35	2x1,9	2x0,45	2x1,75	A
I_g	=	0	2x0,32	0	2x0,18	0	2x0,38	A
W_{ig}	=	0	2x250	0	2x130	0	2x120	W
W_{ia}	=	2x6,6	2x20,4	2x3,5	2x19	2x3,6	2x14	kW
W_a	=	2x6,6	2x5,4	2x3,5	2x6,5	2x3,6	2x4,25	kW
W_o	=	0	30	0	25	0	19,5	kW
d_{tot}	=	-	5	-	5	-	5	%
η	=	-	73,5	-	66	-	69,5	%

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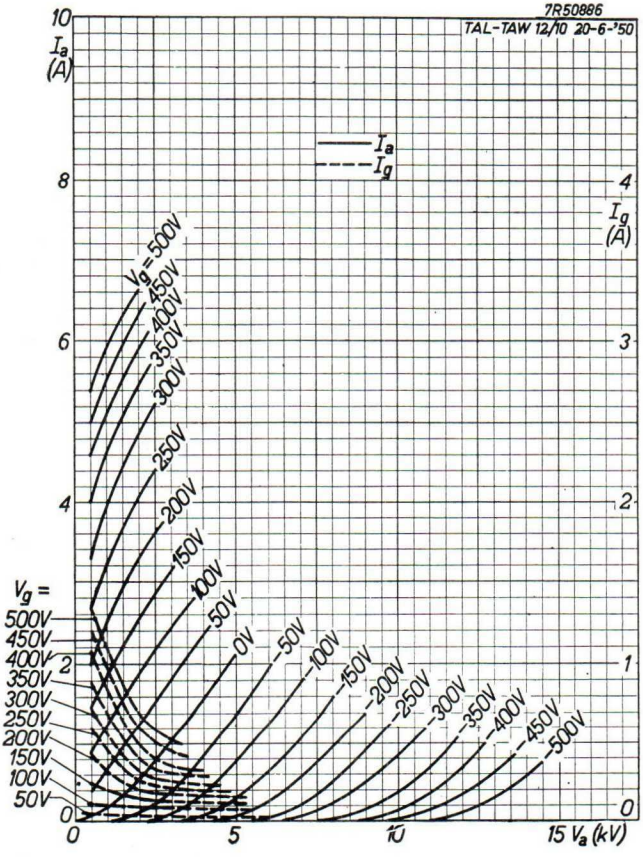

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TAW 12/10

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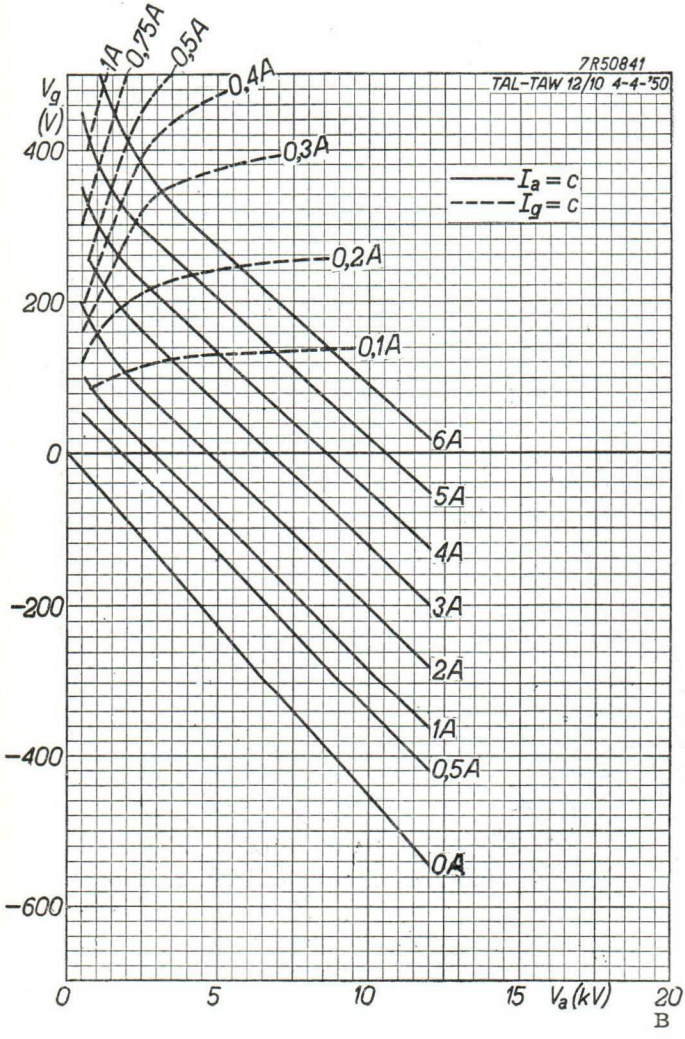

B

PHILIPS

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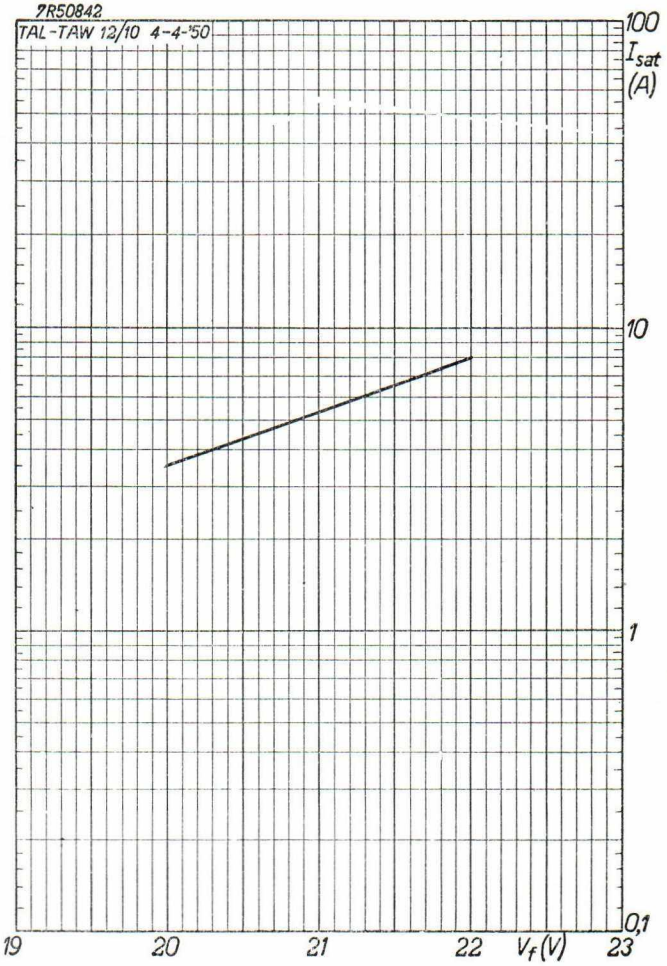
TAW 12/10



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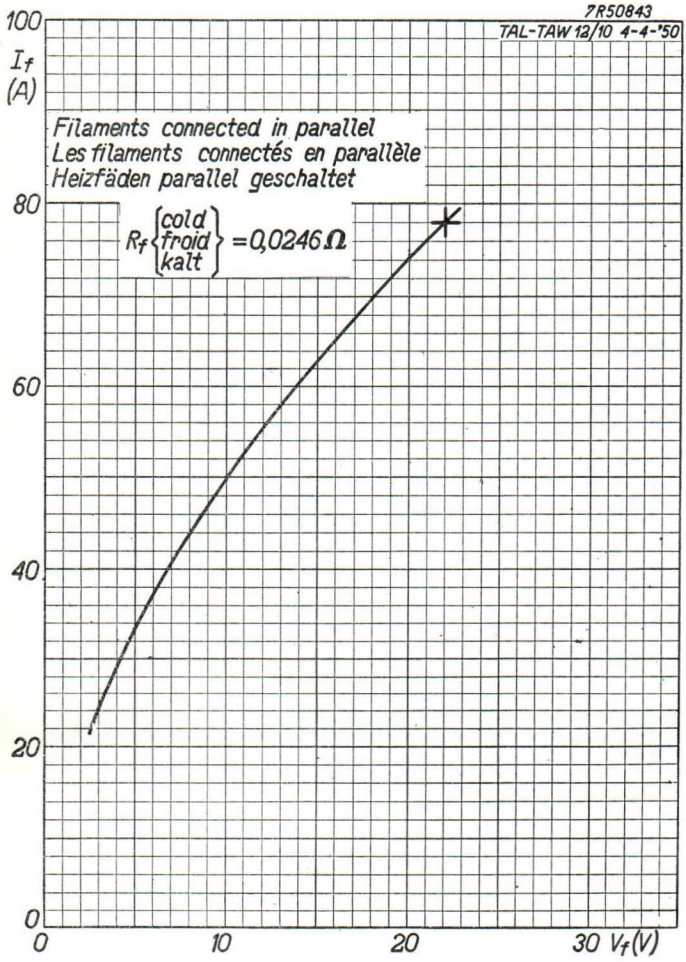

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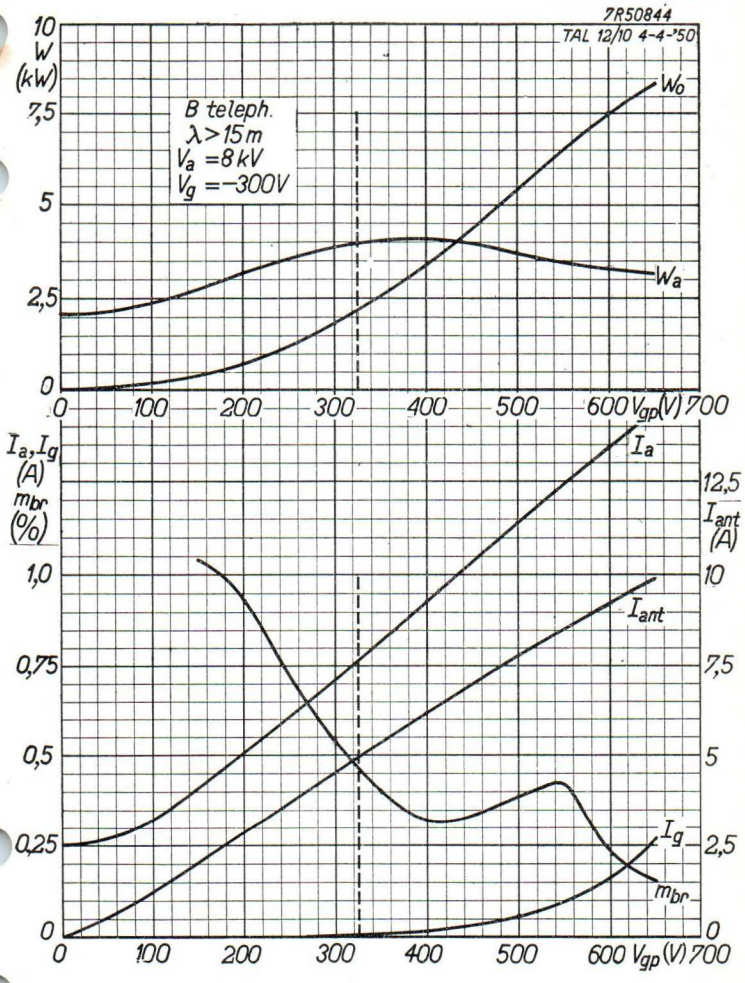
TAL 12/10



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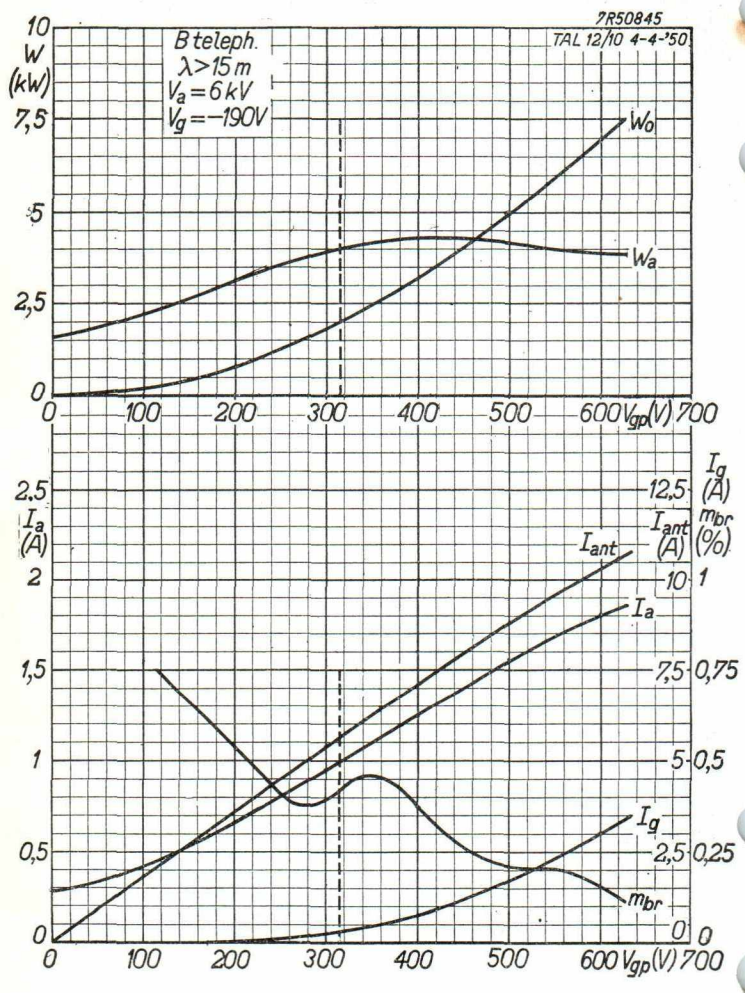

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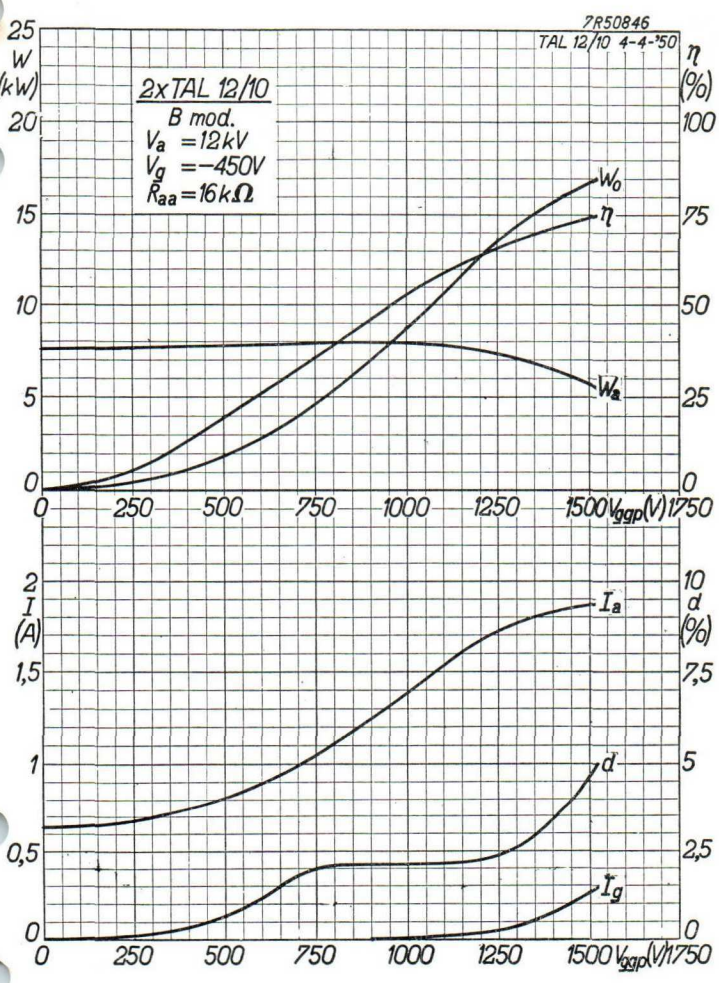

TAL 12/10

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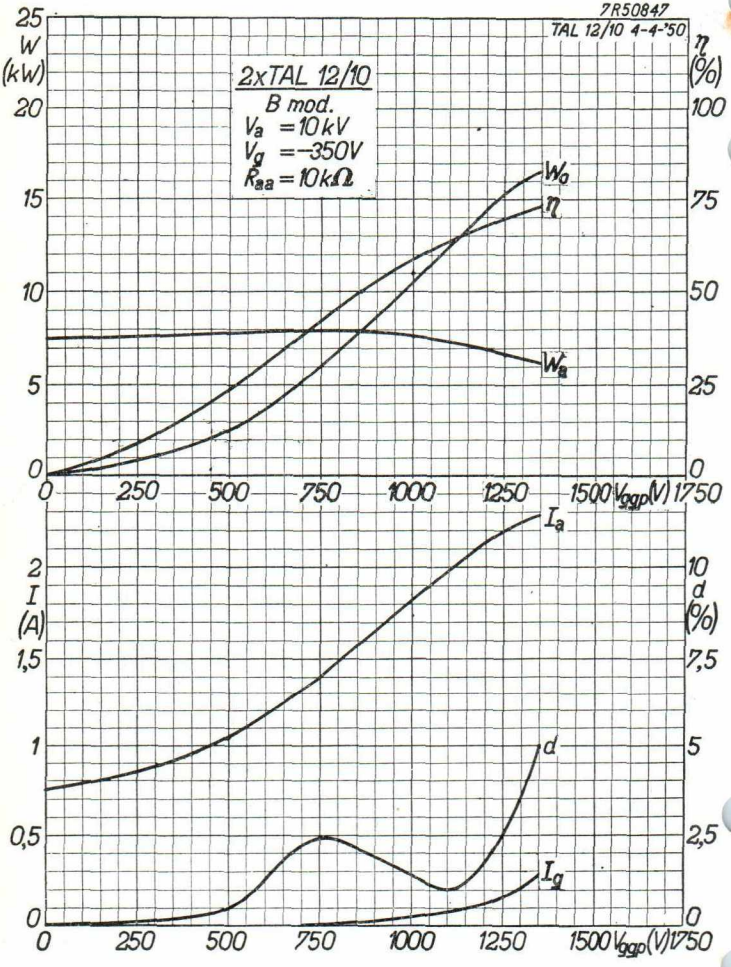

H

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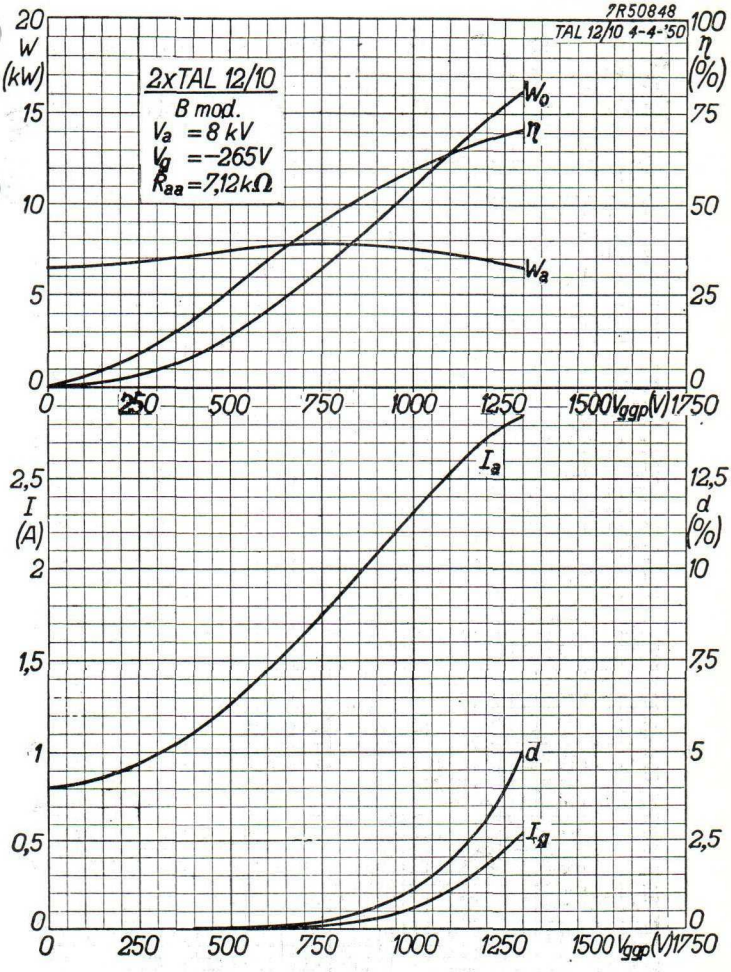

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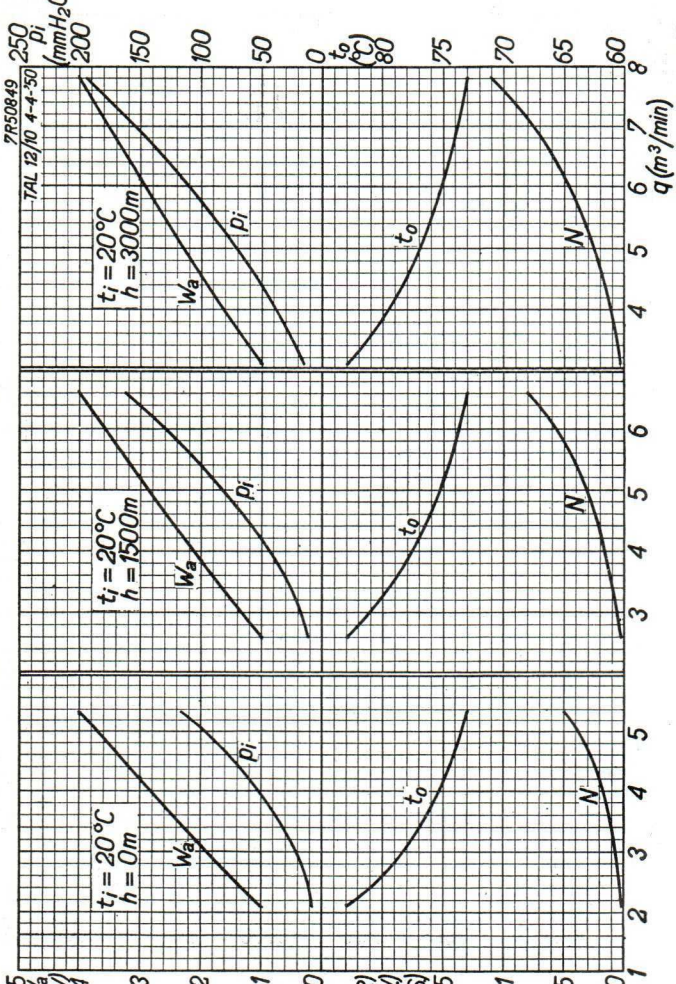

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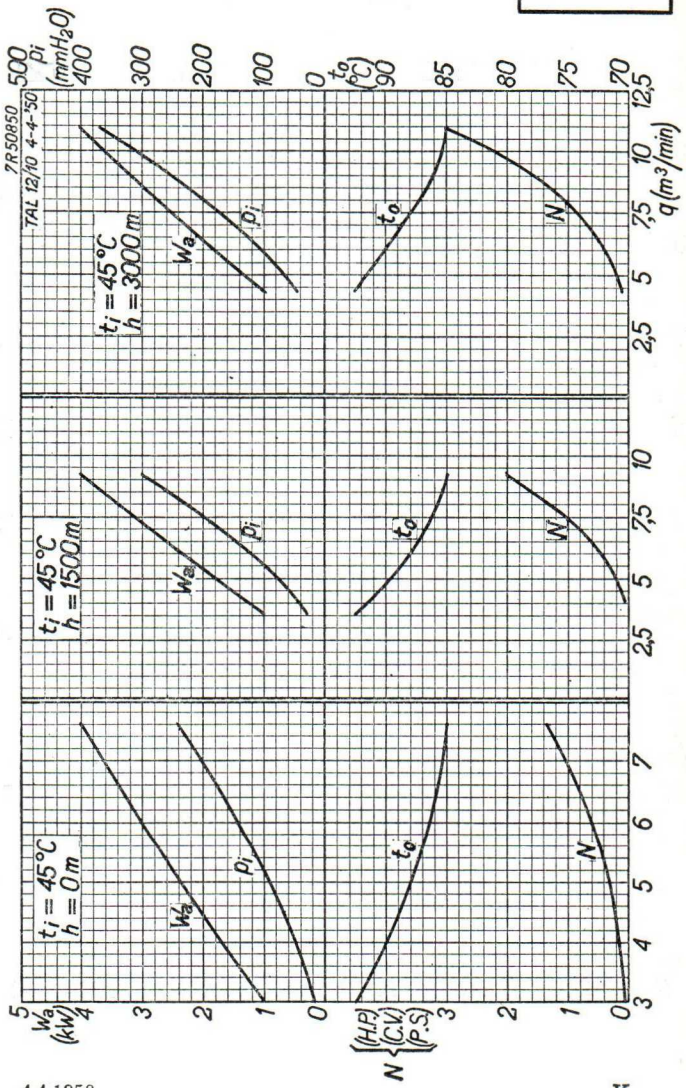

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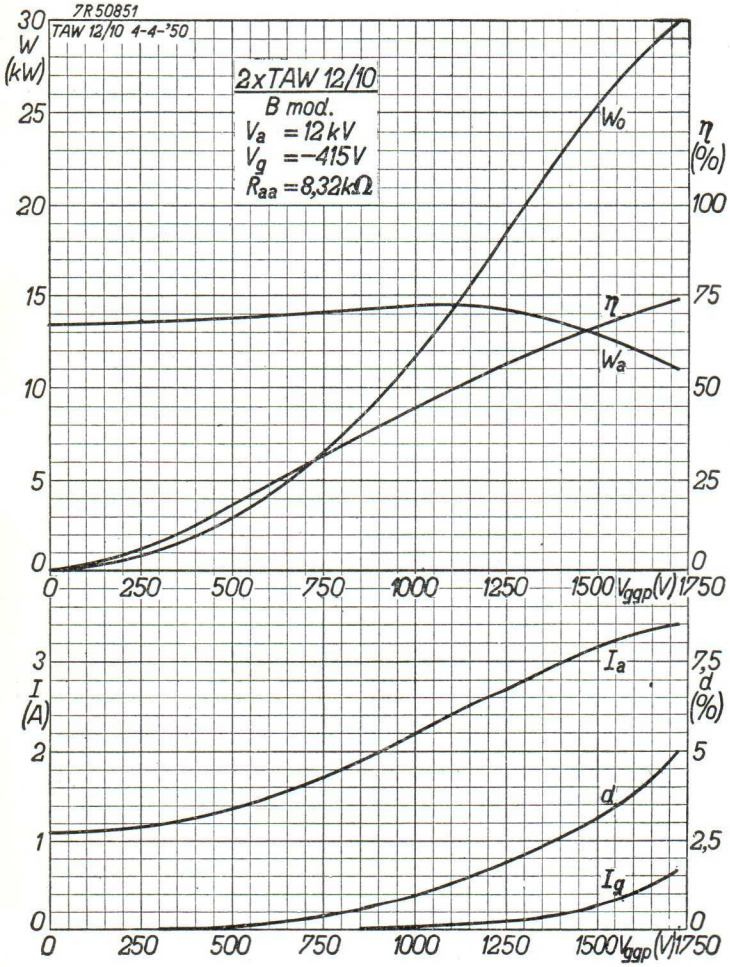

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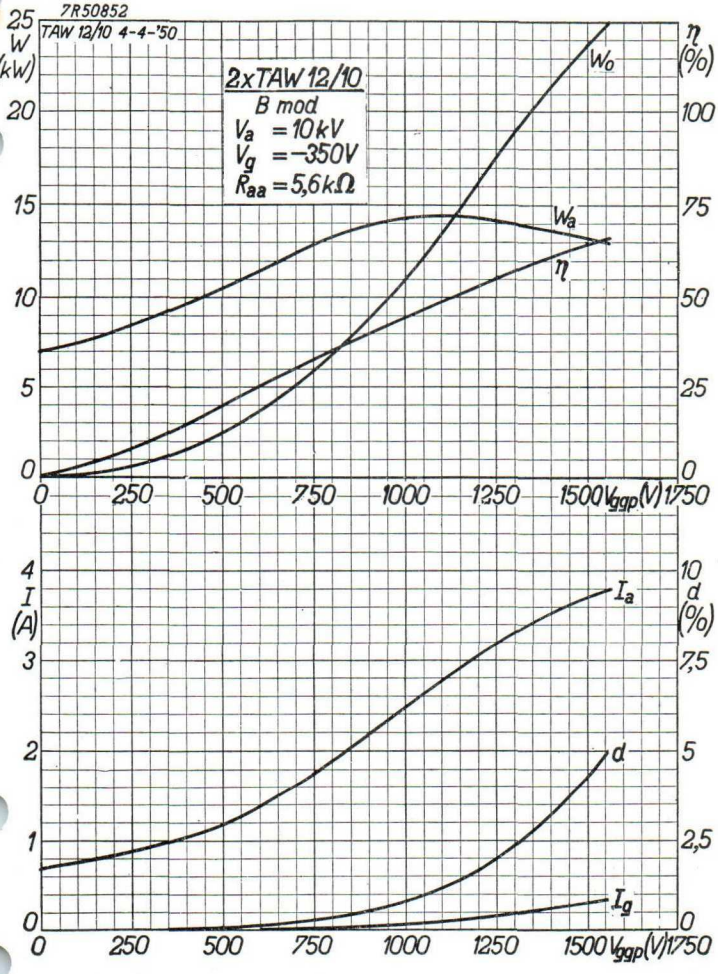

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M

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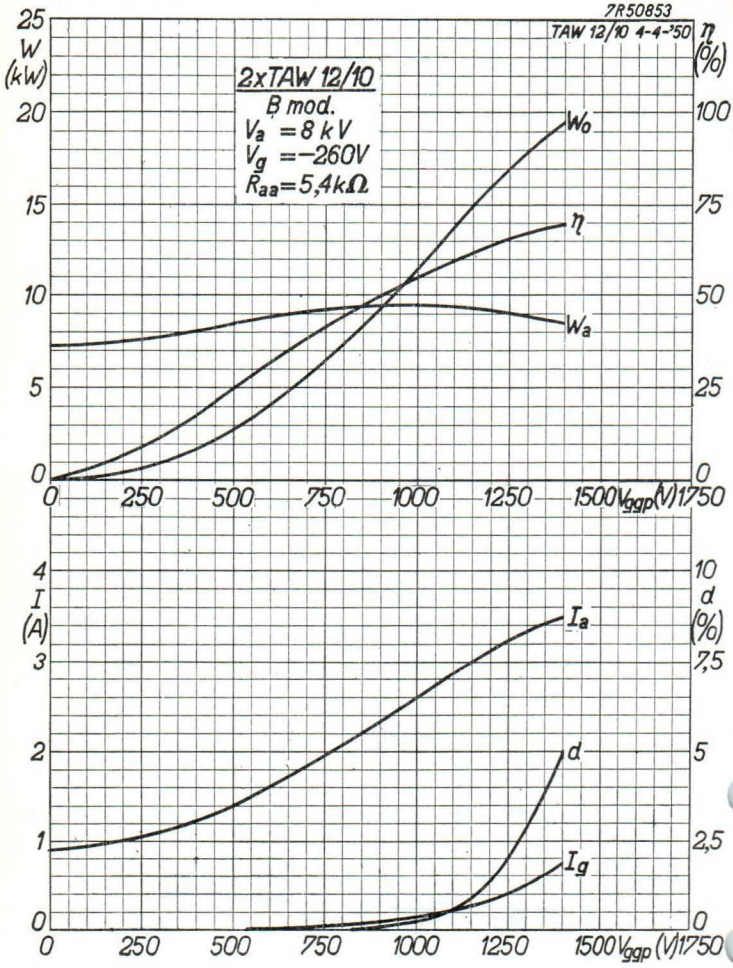

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