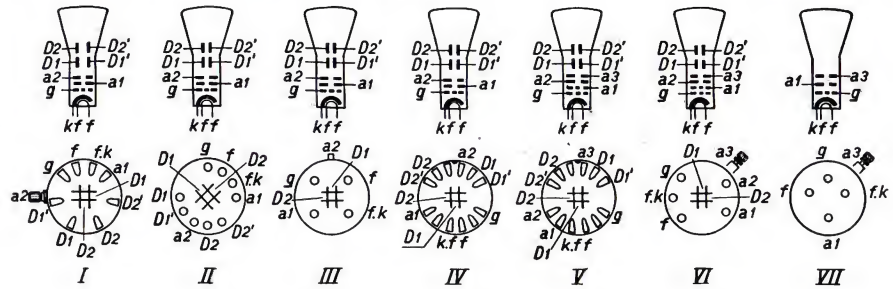
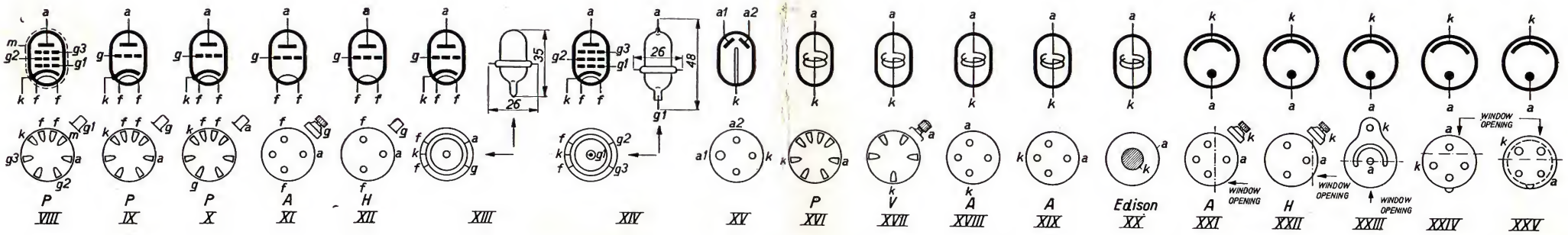
PHILIPS' HIGH-VACUUM CATHODE RAY TUBES

Type Number	Tube type	Deflection	Colour of luminous spot	Max. screen diameter mm	Greatest length without pins (max.)	Greatest length without pins (min.)	Base connection	Filament data: Heating	Filament data: Voltage Volts	Filament data: Current Amps	Max. voltage on 3rd anode Va_{3max} Volts	Max. voltage on 2nd anode Va_{2max} Volts	Max. voltage on 1st anode Va_{1max} Volts	Max. grid bias for suppr. of the ray Vg_{max} Volts		Operating data: Voltage on 3rd anode Va_3 Volts	Operating data: Voltage on 2nd anode Va_2 Volts	Operating data: Voltage on 1st anode Va_1 Volts	Operating data: Voltage of grid Vg Volts	Operating data: Sensitivity [2] N_1 mm/V	Operating data: Sensitivity [3] N_2 mm/V	Grid capacity [4] Cg μμF	Capacity of deflection plates [5] $C_{D_1D_1'}$	Capacity of deflection plates [6] $C_{D_2D_2'}$	Type Number
DG7-1	Cathode ray tube for oscilloscopes	Double electrostatic	Green	75	165	150	I	indir.	4,0	1,0	—	800	300	—30	The grid voltage may never become positive	—	800	200[1])	The grid voltage must be adjusted to the desired light intensity.	0,20	0,14	7	3	4	**DG7-1**
																—	500	140[1])		0,32	0,22				
DG9-3 [7])	Cathode ray tube for oscilloscopes	Double electrostatic	Green	103	350	320	II	indir.	4,0	1,0	—	1200	500	—40		—	1000	400[1])		0,40	0,30[11])	6	4	5,5	**DG9-3**
DG16-1 [8])	Cathode ray tube for oscilloscopes	Double electrostatic	Green	167	440	416	III	indir.	4,0	1,0	—	2000	600	—40		—	2000	400[1])		0,27	0,20	10	1,5	2	**DG16-1**
																—	1000	200[1])		0,54	0,40				
DG16-2 [9])	Cathode ray tube for oscilloscopes	Double electrostatic	Green	167	450	425	IV	indir.	4,0	1,0	—	2000	600	—40		—	2000	400[1])		0,27	0,20	12	6	7	**DG16-2**
																—	1000	200[1])		0,54	0,40				
DG25-1 [10])	Cathode ray tube for oscillographs and television receivers	Double electrostatic	Green	257	580	550	V	indir.	4,0	1,2	5000	1700	250	—60		5000	1400[1])	250		0,13	0,11	15	5,5	6,5	**DG25-1**
DW31-1 [13])	Cathode ray tube for television receivers	Double electrostatic	White	310	640	610	VI	indir.	4,0	1,2	6000	1200	250	—60		5000	1000[1])	250		0,17	0,13	15	4	5	**DW31-1**
MW31-2	Cathode ray tube for television receivers	Double magnetic	White	310	695	660	VII	indir.	4,0	1,2	6000	magnetic concentration	250	—60		5000	—[12])	250		1,8[14])	1,8[14])	—	—	—	**MW31-2**
DW39-1	Cathode ray tube for television receivers	Double electrostatic	White	395	765	735	VI	indir.	4,0	1,2	6000	1200	250	—60		5000	1000[1])	250		0,18	0,14	15	4	5	**DW39-1**
MW39-2	Cathode ray tube for television receivers	Double magnetic	White	395	745	700	VII	indir.	4,0	1,2	6000	magnetic concentration	250	—60		5000	—[12])	250		2,3[14])	2,3[14])	—	—	—	**MW39-2**

[1]) Set to spot sharpness.
[2]) Of the deflection plates on the cathode side.
[3]) Of the deflection plates on the screen side.
[4]) With respect to all other electrodes.
[5]) On the cathode side.
[6]) On the screen side.
[7]) This tube can also be supplied with a blue screen (type number DB 9-3).
[8]) This tube can also be supplied with a blue screen (DB 16-1) or with a white screen (DW 16-1).
[9]) This tube can also be supplied with a blue screen (DB 16-2) or a long persistence yellow fluorescent screen (DN 16-2).
[10]) This valve can also be supplied with a blue fluorescent screen (DB 25-1).
[11]) The deflection of the deflection plates D_2 and D_2' is asymmetrical to enable asymmetrical control by means of a simple time-base voltage or amplifier circuit (control voltage that fluctuates only in one direction with respect to Va_2). The plate D_2' must be connected to anode a_2. Plate D_2 can then be connected to the asymmetrical time-base voltage or output voltage of the amplifier.
[12]) The number of turns required for magnetic concentration is about 500. The distance of the coil centre from the lower edge of the base must be about 140 mm.
[13]) The newer type, the DW 31-2, is fitted with deflection plates led out at the base.
[14]) Expressed in mm deflection per cm coil width (length of the field through which the electrons of the ray pass) per Gauss mean field-strength. The distance of the coil centre to the screen is 420 mm for tube MW 31-2 and 540 mm for tube MW 39-2.