

ECD Number: 98090101 Description: AANPASSING INSMELTLENGTE TYPE D10-391GM/E1: 9467 000 73112  
Created by: kzep - was: 197 +1.5/-5mm - - wordt 200 +/-2mm  
Date: 05/11/98 - nieuwe insm.ringen (no 10) bestellen  
- aanpassing DATA-sheets en meetbladen  
REDEN: KLANTVRAAG!

Item Number	Description	UM	Rev	Old	New	Start	End
9467 000 73112	D10-391GM/E1 CATHODE-RAY TUBE	st	1	1	1	01/09/98	
DOCUMENTEN	Nieuw/wijziging	p				01/09/98	

End of Report

Master Reference T Lang Page Comment Data

Engineering Change Orders FV 1 INTERNE MEDEDELING d.d.: 05-11-1998  
 \*\*\* VAN: INFO-beheer --- W. Thiessen  
 \*\*\*  
 AAN: ACCOORD INZENDER  
 PRODUKTIE --- P. Aerssens  
 ENGINEERING --- J. Schols/J. Schroder/ Fr. od Camp  
 KWALITEIT --- R. vd Poll  
 LOGISTIEK --- H. Kroon  
 CONTROLLER --- J. Florisse  
 MARKETING --- K. Zeppenfeld  
 MILIEU/VEILIGHEID ---  
 \*\*\* Betreft: Aanpassing insmeltlengte D10-391GM/E1  
 \*\*\*  
 Reden: Klantvraag

Engineering Change Orders FV 2 \*\*  
 XX XX XX XXXXXXXX XXXX  
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End of Report

INSTRUMENT CRT HEERLEN	PROCEDURE ISO9002/par 4.4	KHP-33-92/030 1994-09-05 Pag. 3 van 3
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BIJLAGE 1

WIJZIGINGSVOORSTEL				
CRT Heerlen BV	Voor wijzigingsprocedure zie KHP-33-92-030	Nummer : <i>98090101</i> Voorsteller : <i>K. Zeppenfeld</i>		
Voorstel heeft betrekking op: TYPE: <i>D10-391 GM/E1</i>		Afdeling : <i>33</i> Datum : <i>17-08-98</i>		
Voor gezien:				
		Naam	Par	Afdeling
Omschrijving voorstel:		<i>Aerssens</i>	<i>R</i>	Productie
<i>Insmeltlengte 197 +/- 5 mm</i>		<i>Kroon</i>	<i>R</i>	Logistiek
<i>wijzigen in 200 +/- 2 mm</i>		<i>Zeppenfeld</i>	<i>R</i>	Marketing
		<i>Anden Comp</i>	<i>R</i>	Engineering
		<i>vd Polj</i>	<i>R</i>	Kwaliteits- beheer
<i>N bestellen nieuwe insmelt ringen (68A)</i>		<i>Schoels</i>	<i>R</i>	Milieu/ Veiligheid
<i>wijziging DATA-sheets</i>		<i>Flonwe</i>	<i>off</i>	Controller
<i>aanpassing meetbladen waar nodig</i>		<i>Thiessen</i>	<i>R</i>	Info beheer
<i>bn My/Mx - sling haals!!</i>		Konsekwentie voor:		
<i>oekem/lengte insmelt. -&gt;</i>		Prijs bijlage	<input checked="" type="checkbox"/>	N
		Voorraad checkl.	<input checked="" type="checkbox"/>	N
		Gereedschap bijlage <i>in in ring</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Reden wijziging:		Milieu/ Veiligheid checkl.	<input checked="" type="checkbox"/>	N
<i>Rantwaag</i>		Ingangscontrole	<input checked="" type="checkbox"/>	N
Voor commentaar verzonden d.d.: <i>18-08-98</i>		Wijziging aangenomen d.d. <i>01-09-98</i>		
Retour voor d.d.: <i>31-08-98</i>		Par./Naam Quality Manager <i>Wlaus Zeppenfeld</i>		

Geautoriseerd:	P. Aerssens	<i>P.A.</i>	DD: <i>30-09-1994</i>
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Meting: insmelt lengte + totale lengte.

	insm.	tot.		Vg1	MX	MY
032 5840 -	200	218		31,7	8,29	5,67
5872 -	200	218				
5664 -	200	218				
5809 -	200	219	- insmelt scheef.			
5501 -	199	217	- roset scheef geplakt.			
5811 -	199	217	- geslepe - braam.			
4785 -	200	218	- roset scheef			
5139 -	199	217	- insmelt scheef			
5613 -	199	218	- roset scheef geplakt.			
5627 -	200	218				
5600 -	198	216				
5824 -	201	218	- braam - geslepe.			
5863 -	199	217	- insm. scheef.			
2949 -	200	218	- schif schuur dies in 7.			
4076 -	199	217	- insm. scheef.			
5626 -	201	217	- " "			
5239 -	200	218				
5242 -	201	218	- insm. scheef.			
5817 -	198	217	- roset scheef geplakt.			
5874 -	199	217	- braam insmelt.			
5860 -	201	219	- pompstengel uit te lang.			
5821 -	200	218				
5436 -	200	218				

20-8-90  
Schok.

## NOTES

1. The deflection plates must be operated symmetrically: floating mean x- or y-potentials will result into non-uniform line width and geometry distortion. The mean x- and y-potentials should be equal; under this condition the tube will be within the specification without corrections for astigmatism and geometry (see also note 5).
2. For some applications a mean x-potential up to 50 V positive with respect to mean y-potential is inevitable. In this case  $V_{g5}$  must be made equal to mean x-potential, and a range of 0 to - 25 V with respect to mean y-potential will be required on  $g_{2,4}$  for astigmatism correction. The circuit resistance for  $V_{g2,4}$  should be  $< 10 \text{ k}\Omega$  and  $< 25 \text{ k}\Omega$  for  $V_{g5}$ .
3. The sensitivity at a deflection of less than 75 % of the useful scan will not differ from the sensitivity at a deflection of 25 % of the useful scan by more than the indicated value.
4. The tube is adjusted by internal permanent magnetic elements for optimum geometry (orthogonality, trapezium and barrel/pin-cushion), brightness uniformity, eccentricity of undeflected spot, and astigmatism.
5. A graticule consisting of concentric rectangles of 68 x 54.4 mm and 66.8 x 53.2 mm is aligned with the internal graticule. With optimum trace rotation correction the edges of a raster will fall between these rectangles.
6. The tube has a trace rotation coil, fixed onto the lower cone part. The coil has a maximum resistance of  $235 \Omega$  at  $80^\circ \text{ C}$ . The maximum required voltage is approx. 6 V for tube tolerances ( $\pm 5^\circ$ ) and earth magnetic field with reasonable shielding ( $\pm 2^\circ$ ).
7. Measured with the shrinking raster method in the centre of the screen under typical operating conditions, adjusted for optimum spot size.

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	V <sub>50</sub>	M <sub>X</sub>	M <sub>Y</sub>
032 5872	31.7	0.29	5.67
5664	25.4	0.24	5.40
5840	26.5	0.10	5.70
5811	28.8	0.62	5.44
5581	24.8	0.32	5.70
5874	25.1	0.60	5.45
5809	30.2	0.19	5.73
5139	28.8	0.31	5.70
4405	29.7	0.10	5.46
5824	27	0.02	5.70
5600	34	0.27	5.77
5627	28.1	0.05	5.70
4876	31.5	0.41	5.46
2949	30.2	0.17	5.70
5863	32.1	0.27	5.46
5242	24.8	0.00	5.68
5239	25.9	0.24	5.43
5626	31.3	4.98	5.69
5613	24.3	0.32	5.49
5817	30.8	0.22	5.40
5436	28.7	0.05	5.40
5821	29.8	0.04	5.71
5800	31.6	4.49	5.40

$\bar{X}_{23}$                       0,2                      5,71  
 $S_{23}$                          0,19.                     0,03                     V/cm

20-8-98  
*B*

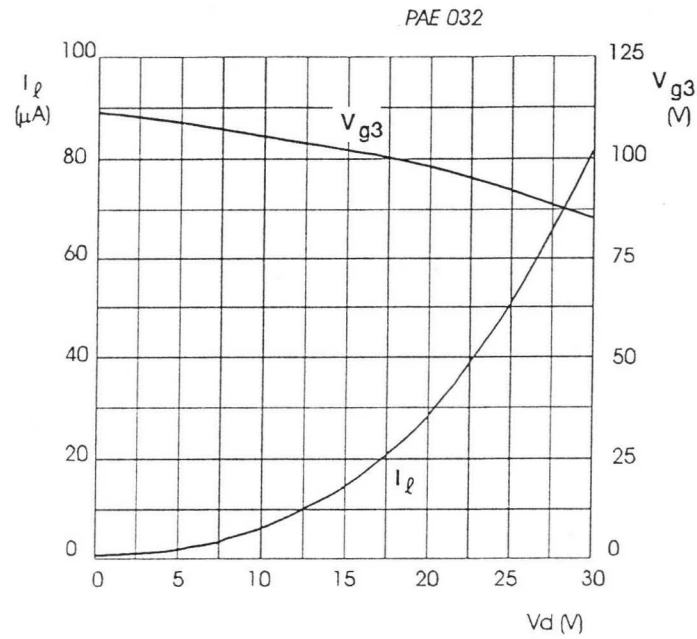


Fig.5 Screen current ( $I_g$ ) and focusing voltage ( $V_{g3}$ ) as a function of grid drive voltage ( $V_d$ ) at  $V_{g2,g4} = 500$  V; typical curves.

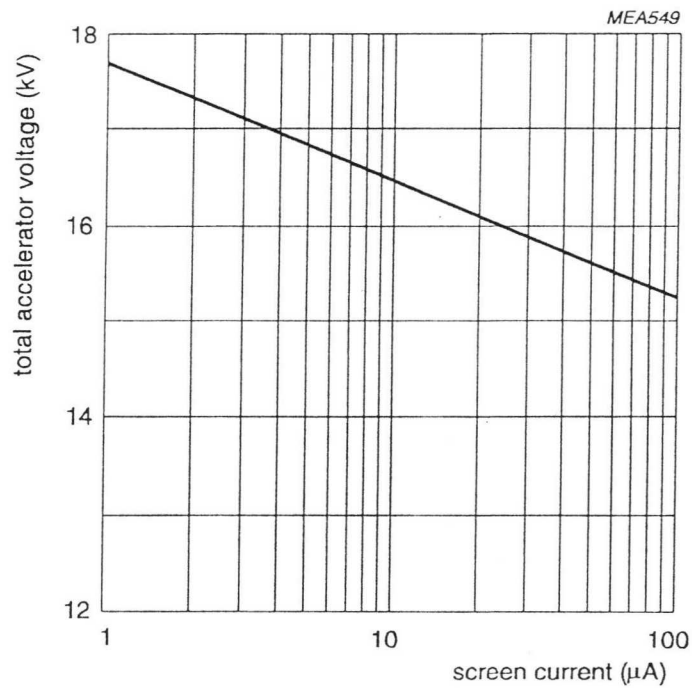


Fig.6 Isoexposure-rate limit curve for 0.5 mR/h, measured in accordance with EIA RS-502.

## INSTRUMENT CATHODE-RAY TUBE

- 10cm diagonal rectangular flat face
- domed mesh post-deflection acceleration
- short tube max. 220 mm
- high precision by permanent magnetic correction system
- low heater power consumption

### QUICK REFERENCE DATA

Final accelerator voltage	$V_{g7(\ell)}$	4 kV
First accelerator voltage	$V_{g2,4}$	500 V
Minimum useful scan area		70 mm x 56 mm
Deflection coefficient		
horizontal	$M_x$	8.4 V/cm
vertical	$M_y$	5.7 V/cm

### OPTICAL DATA

Screen		
type		GM (P7)
fluorescent colour		purplish-blue
phosphorescent colour		yellowish-green
persistence		long
Useful scan area		$\geq 68$ mm x 54 mm
Internal graticule		type E1

### HEATING

Indirect by AC or DC \*

Heater voltage	$V_f$	6.3 V
Heater current	$I_f$	0.1 A
Heating time to attain 10% of the cathode current at equilibrium conditions		approx. 7 s

\* not to be connected in series with other tubes.

# D10-391GM/E1

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## MECHANICAL DATA

Dimensions and connections (see also outline drawings)

Overall length (socket included)	max. 220 mm
Faceplate dimensions	80 ± 0.5 mm x 69 ± 0.5 mm
Net mass (including trace rotation coil)	approx. 450 g
Base	12 pin, all glass JEDEC B12-246

## Mounting

The tube can be mounted in any position. It must not be supported by the socket and not by the base region alone.

## Accessories

Socket with solder tags	type 55594
Socket with printed wiring pins	type 55595
Final accelerator contact connector	type 55569
Mu metal shield	type 55461

## FOCUSING

electrostatic

## DEFLECTION

x plates  
y plates

double electrostatic  
symmetrical  
symmetrical

**CAPACITANCES \***

$x_1$ to all other elements except $x_2$	$C_{x_1(x_2)}$	4 pF
$x_2$ to all other elements except $x_1$	$C_{x_2(x_1)}$	4 pF
$y_1$ to all other elements except $y_2$	$C_{y_1(y_2)}$	3 pF
$y_2$ to all other elements except $y_1$	$C_{y_2(y_1)}$	3 pF
$x_1$ to $x_2$	$C_{x_1x_2}$	2 pF
$y_1$ to $y_2$	$C_{y_1y_2}$	1 pF
Control grid to all other elements	$C_{g_1}$	6 pF
Cathode to all other elements	$C_k$	3 pF
Focus electrode to all other elements	$C_{g_3}$	5 pF
Final accelerator electrode to all other elements	$C_{g_7}$	230 pF

\* Approximate values

# D10-391GM/E1

## DIMENSIONS AND CONNECTIONS

Dimensions in mm

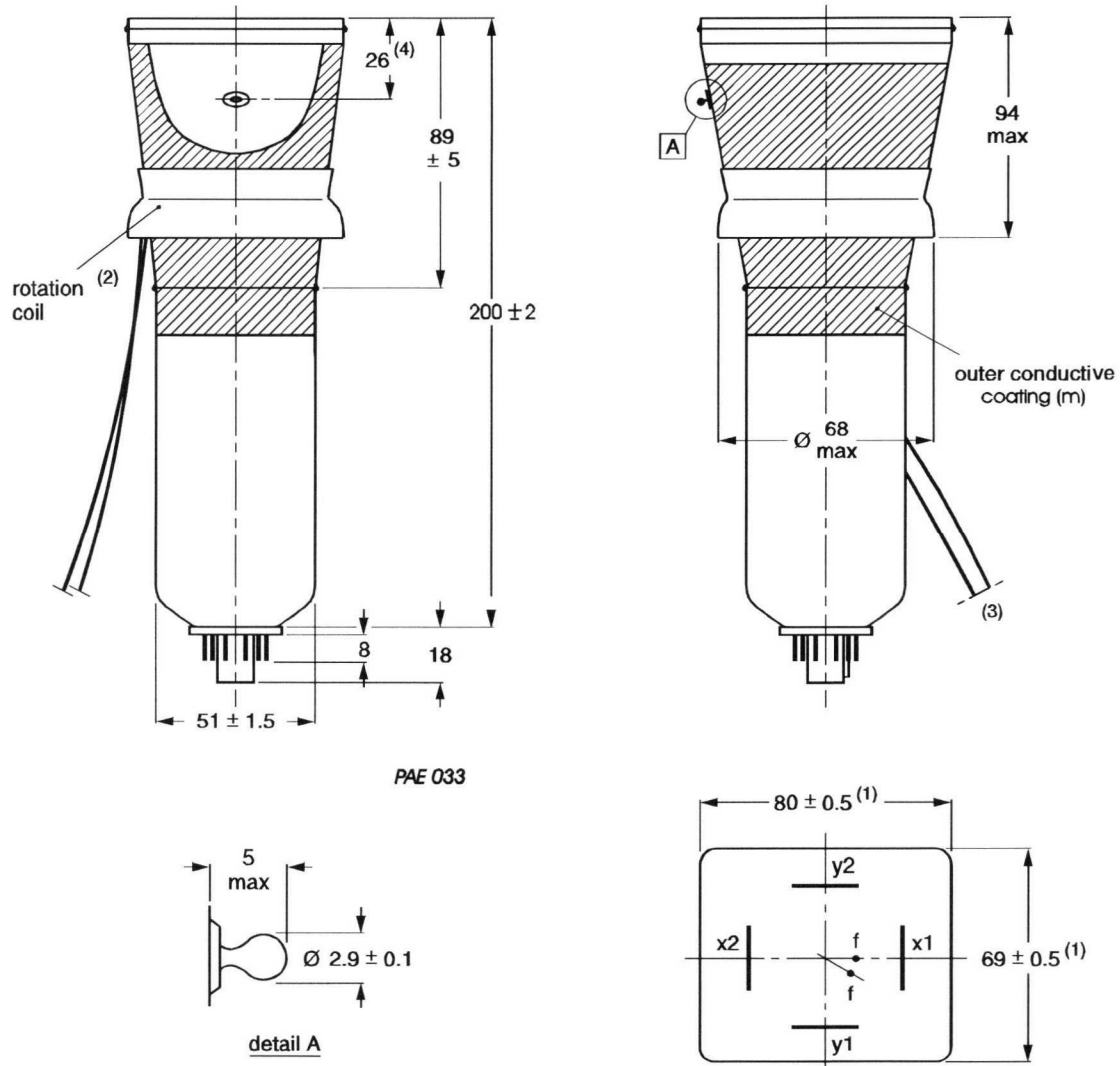


Fig.1 Mechanical outlines.

- (1) Dimensions of faceplate only. The complete assembly of faceplate and cone (frit seal included) will pass through an opening of 82 mm x 71 mm).
- (2) The coil is fixed to the envelope with silicone rubber and adhesive tape.
- (3) The length of rotation coil connecting leads is min. 350 mm.
- (4) The centre of the final accelerator contact is situated within a square of 7 mm x 7 mm around the indicated position.

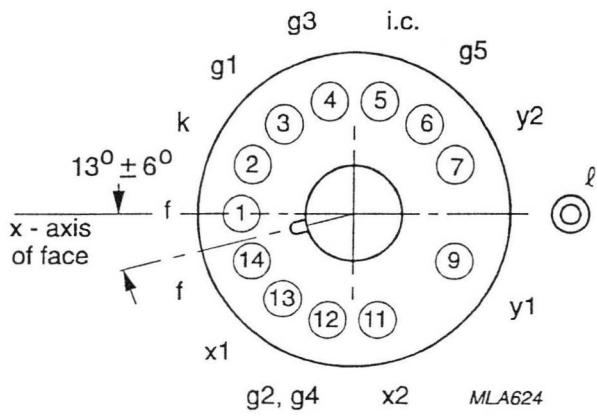


Fig. 2 Pin arrangement, bottom view.

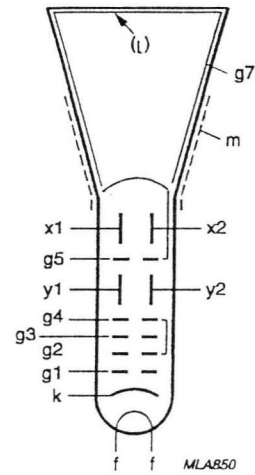


Fig. 3 Electrode configuration.

Internal graticule

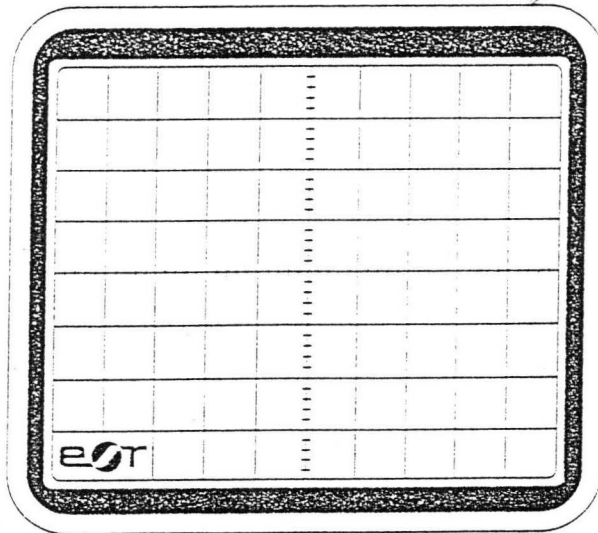


Fig. 4 Front view of the tube with internal graticule E1.

Line thickness = 0.15 mm; colour green/grey.

# D10-391GM/E1

## TYPICAL OPERATION (voltages are with respect to the cathode)

### Conditions

Final accelerator voltage	$V_{g7(\ell)}$	4 kV	
Mean deflection plate potential		500 V	note 1
Shield voltage for optimum geometry	$V_{g5}$	500 V	note 2
First accelerator and astigmatism control voltage	$V_{g2,4}$	500 V	note 2
Focusing voltage	$V_{g3}$	75 to 125 V	
Cut-off voltage for visual extinction of focused spot	$-V_{g1}$	23 to 45 V	

Outer conductive coating (m) and mu-metal shield to be earthed

## PERFORMANCE

Horizontal deflection coefficient	$M_x$	8.4 V/cm $\pm$ 10 %	
Vertical deflection coefficient	$M_y$	5.7 V/cm $\pm$ 5 %	
Deviation of deflection linearity		< 2%	note 3
Geometry distortion			note 4
Eccentricity of undeflected spot			
in horizontal direction		< 4 mm	
in vertical direction		< 2 mm	
Angle between x and y traces		90°	note 4
Angle between x-trace and x-axis of internal graticule		< 5°	note 6
Luminance reduction with respect to screen centre			
x axis, outer graticule line		< 30%	
y axis, outer graticule line		< 30%	
any corner		< 50%	
Grid drive for 10 $\mu$ A screen current	$V_d$	approx. 12.5 V	Fig. 5
Line width			
at 10 $\mu$ A	l.w.	approx. 0.3 mm	note 7
at 25 $\mu$ A	l.w.	approx. 0.4 mm	note 7

**LIMITING VALUES** (Absolute maximum rating system)

Final accelerator voltage	$V_{g7(\ell)}$	max. 5 kV	Fig. 6
Shield voltage	$V_{g5}$	max. 2 kV	
First accelerator and astigmatism control voltage	$V_{g2,4}$	max. 2 kV	
Focusing electrode voltage	$V_{g3}$	max. 2 kV	
Control grid voltage	$-V_{g1}$	max. 200 V min. 0 V	
Cathode to heater voltage			
positive	$V_{kf}$	max. 125 V	
negative	$-V_{kf}$	max. 125 V	
Heater voltage	$V_f$	max. 6.6 V min. 6.0 V Optimal 6.15 V $\pm$ 0.5 %	
Voltage between $g_{4,5}$ and any deflection plate	$V_{g4,g5,x,y}$	max. 500 V	
Grid drive, averaged over 1 ms	$V_d$	max. 25 V	
Screen dissipation	$W_\ell$	max. 8 mW/cm <sup>2</sup>	
Control grid circuit resistance	$R_{g1}$	max. 1 M $\Omega$	

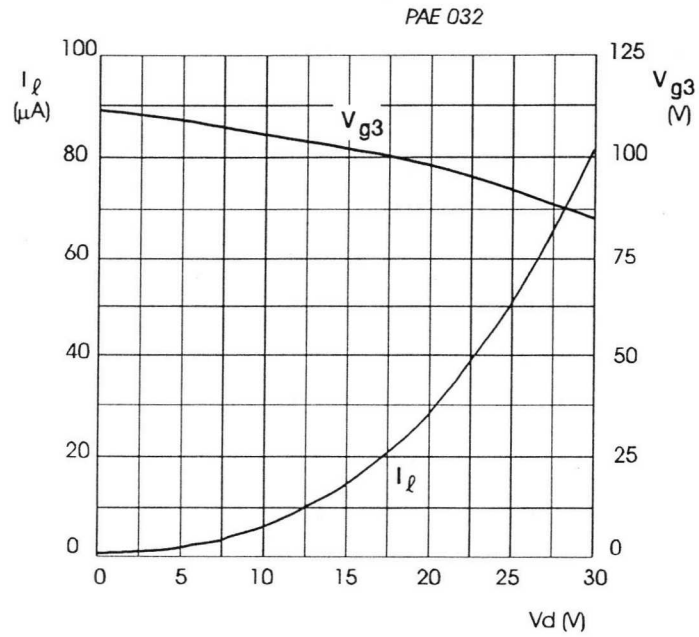


Fig.5 Screen current ( $I_s$ ) and focusing voltage ( $V_{g3}$ ) as a function of grid drive voltage ( $V_d$ ) at  $V_{g2,g4} = 500$  V; typical curves.

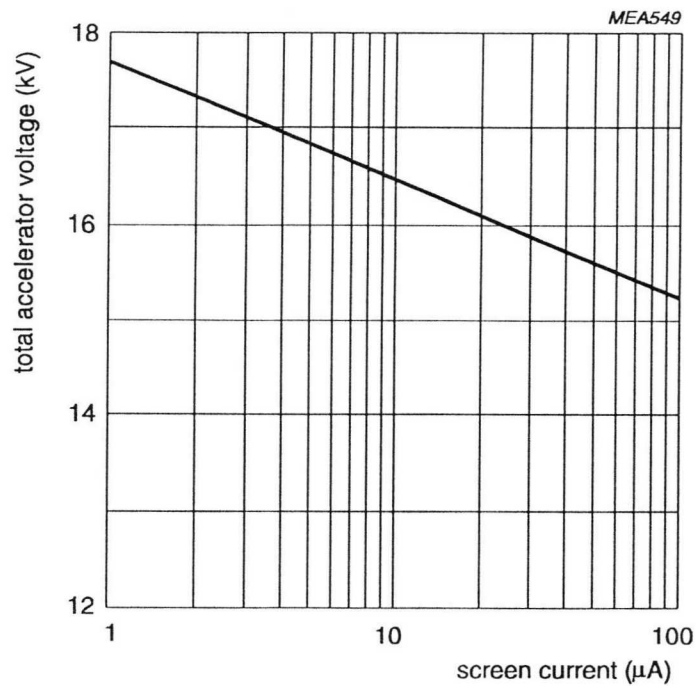


Fig.6 Isoexposure-rate limit curve for 0.5 mR/h, measured in accordance with EIA RS-502.

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**NOTES**

1. The deflection plates must be operated symmetrically: floating mean x- or y-potentials will result into non-uniform line width and geometry distortion. The mean x- and y-potentials should be equal; under this condition the tube will be within the specification without corrections for astigmatism and geometry (see also note 5).
2. For some applications a mean x-potential up to 50 V positive with respect to mean y-potential is inevitable. In this case  $V_{g5}$  must be made equal to mean x-potential, and a range of 0 to - 25 V with respect to mean y-potential will be required on  $g_{2,4}$  for astigmatism correction. The circuit resistance for  $V_{g_{2,4}}$  should be  $< 10 \text{ k}\Omega$  and  $< 25 \text{ k}\Omega$  for  $V_{g5}$ .
3. The sensitivity at a deflection of less than 75 % of the useful scan will not differ from the sensitivity at a deflection of 25 % of the useful scan by more than the indicated value.
4. The tube is adjusted by internal permanent magnetic elements for optimum geometry (orthogonality, trapezium and barrel/pin-cushion), brightness uniformity, eccentricity of undeflected spot, and astigmatism.
5. A graticule consisting of concentric rectangles of 68 x 54.4 mm and 66.8 x 53.2 mm is aligned with the internal graticule. With optimum trace rotation correction the edges of a raster will fall between these rectangles.
6. The tube has a trace rotation coil, fixed onto the lower cone part. The coil has a maximum resistance of 235  $\Omega$  at 80° C. The maximum required voltage is approx. 6 V for tube tolerances ( $\pm 5^\circ$ ) and earth magnetic field with reasonable shielding ( $\pm 2^\circ$ ).
7. Measured with the shrinking raster method in the centre of the screen under typical operating conditions, adjusted for optimum spot size.

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## INSTRUMENT CATHODE-RAY TUBE

- 10cm diagonal rectangular flat face
- domed mesh post-deflection acceleration
- short tube max. 216.5 mm
- high precision by permanent magnetic correction system
- low heater power consumption

### QUICK REFERENCE DATA

Final accelerator voltage	$V_{g7(\ell)}$	4 kV
First accelerator voltage	$V_{g2,4}$	500 V
Minimum useful scan area		70 mm x 56 mm
Deflection coefficient		
horizontal	$M_x$	9.5 V/cm
vertical	$M_y$	6.0 V/cm

### OPTICAL DATA

Screen		
type		GM (P7)
fluorescent colour		purplish-blue
phosphorescent colour		yellowish-green
persistence		long
Useful scan area		$\geq 68$ mm x 54 mm
Internal graticule		type E1

### HEATING

Indirect by AC or DC *		
Heater voltage	$V_f$	6.3 V
Heater current	$I_f$	0.1 A
Heating time to attain 10% of the cathode current at equilibrium conditions		approx. 7 s

\* not to be connected in series with other tubes.

# D10-391GM/E1

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## MECHANICAL DATA

Dimensions and connections (see also outline drawings)

Overall length (socket included)	max. 216.5 mm
Faceplate dimensions	80 ± 0.5 mm x 69 ± 0.5 mm
Net mass (including trace rotation coil)	approx. 450 g
Base	12 pin, all glass JEDEC B12-246

## Mounting

The tube can be mounted in any position. It must not be supported by the socket and not by the base region alone.

## Accessories

Socket with solder tags	type 55594
Socket with printed wiring pins	type 55595
Final accelerator contact connector	type 55569
Mu metal shield	type 55461

## FOCUSING

electrostatic

## DEFLECTION

x plates	double electrostatic
y plates	symmetrical
	symmetrical

## CAPACITANCES \*

$x_1$ to all other elements except $x_2$	$C_{x1(x2)}$	4 pF
$x_2$ to all other elements except $x_1$	$C_{x2(x1)}$	4 pF
$y_1$ to all other elements except $y_2$	$C_{y1(y2)}$	3 pF
$y_2$ to all other elements except $y_1$	$C_{y2(y1)}$	3 pF
$x_1$ to $x_2$	$C_{x1x2}$	2 pF
$y_1$ to $y_2$	$C_{y1y2}$	1 pF
Control grid to all other elements	$C_{g1}$	6 pF
Cathode to all other elements	$C_k$	3 pF
Focus electrode to all other elements	$C_{g3}$	5 pF
Final accelerator electrode to all other elements	$C_{g7}$	230 pF

\* Approximate values

# D10-391GM/E1

## DIMENSIONS AND CONNECTIONS

Dimensions in mm

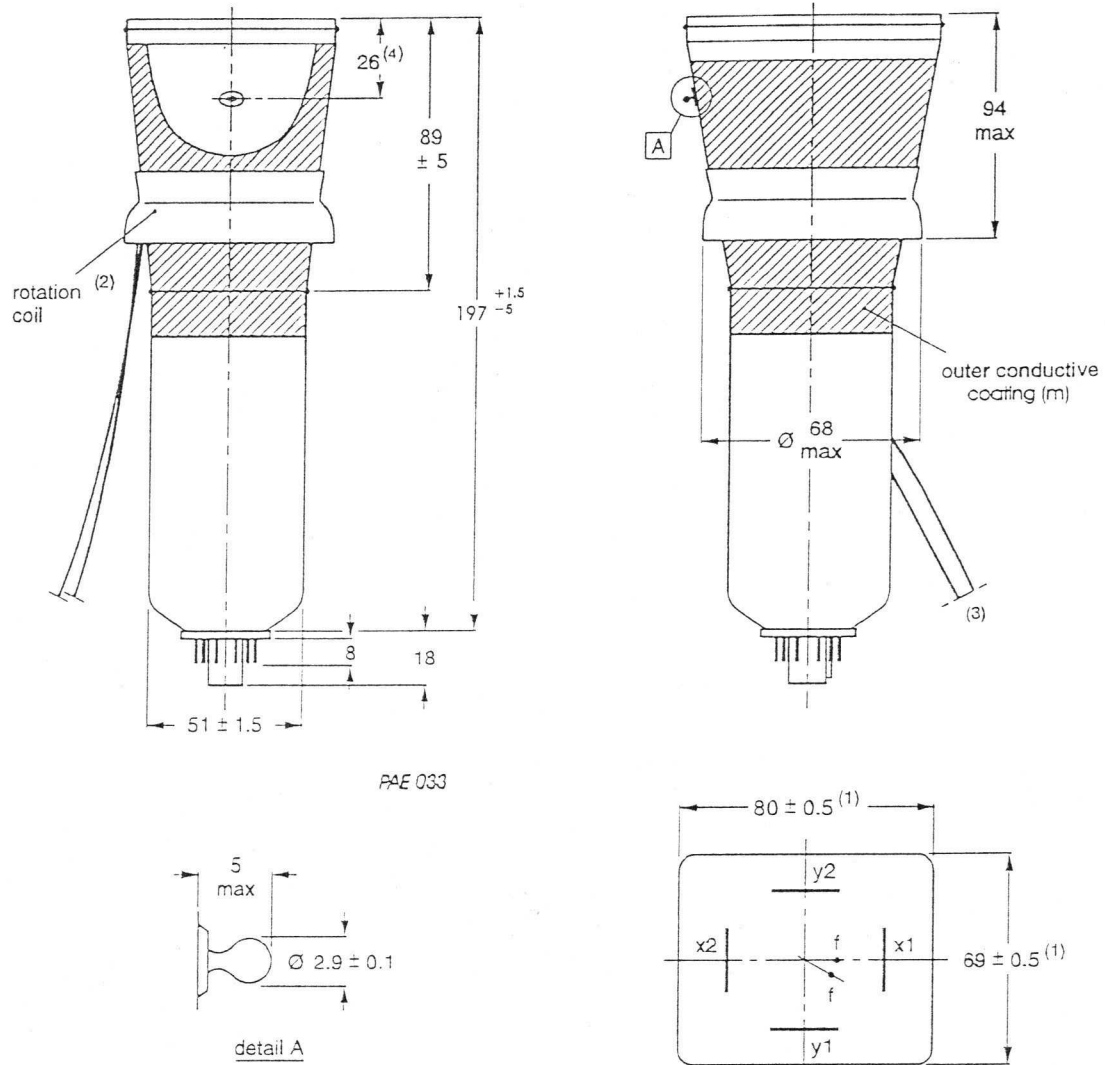


Fig.1 Mechanical outlines.

- (1) Dimensions of faceplate only. The complete assembly of faceplate and cone (frit seal included) will pass through an opening of 82 mm x 71 mm).
- (2) The coil is fixed to the envelope with silicone rubber and adhesive tape.
- (3) The length of rotation coil connecting leads is min. 350 mm.
- (4) The centre of the final accelerator contact is situated within a square of 7 mm x 7 mm around the indicated position.

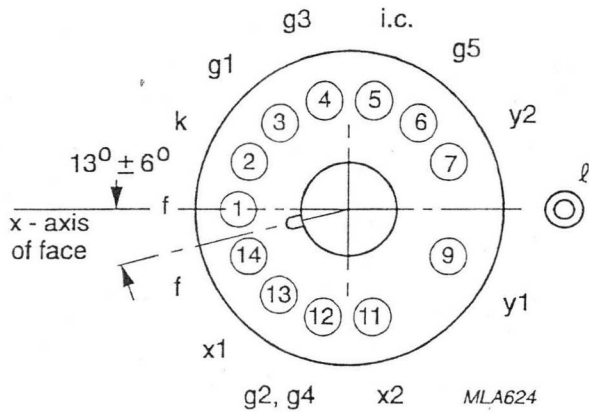


Fig. 2 Pin arrangement, bottom view.

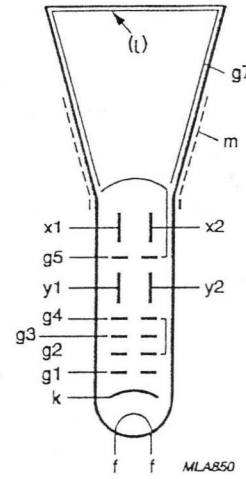


Fig. 3 Electrode configuration.

Internal graticule

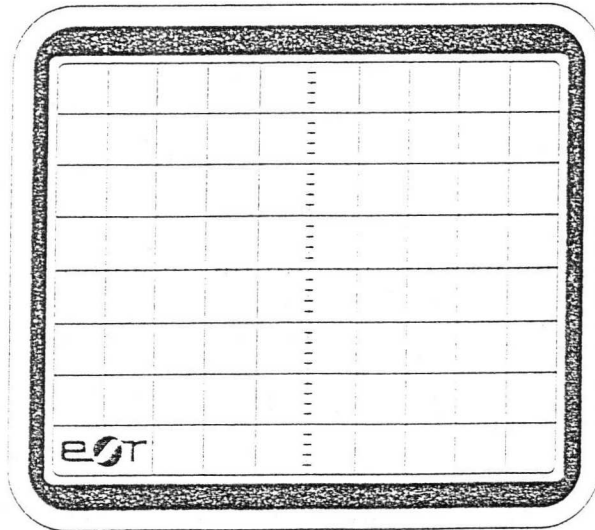


Fig. 4 Front view of the tube with internal graticule E1.

Line thickness = 0.15 mm; colour green/grey.

# D10-391GM/E1

## TYPICAL OPERATION (voltages are with respect to the cathode)

### Conditions

Final accelerator voltage	$V_{g7(t)}$	4 kV	
Mean deflection plate potential		500 V	note 1
Shield voltage for optimum geometry	$V_{g5}$	500 V	note 2
First accelerator and astigmatism control voltage	$V_{g2,4}$	500 V	note 2
Focusing voltage	$V_{g3}$	75 to 125 V	
Cut-off voltage for visual extinction of focused spot	$-V_{g1}$	23 to 45 V	

Outer conductive coating (m) and mu-metal shield to be earthed

## PERFORMANCE

Horizontal deflection coefficient	$M_x$	9.5 V/cm $\pm$ 10 %	
Vertical deflection coefficient	$M_y$	6.0 V/cm $\pm$ 5 %	
Deviation of deflection linearity		< 2%	note 3
Geometry distortion			note 4
Eccentricity of undeflected spot			
in horizontal direction		< 4 mm	
in vertical direction		< 2 mm	
Angle between x and y traces		90°	note 4
Angle between x-trace and x-axis of internal graticule		< 5°	note 6
Luminance reduction with respect to screen centre			
x axis, outer graticule line		< 30%	
y axis, outer graticule line		< 30%	
any corner		< 50%	
Grid drive for 10 $\mu$ A screen current	$V_d$	approx. 12.5 V	Fig. 5
Line width			
at 10 $\mu$ A	l.w.	approx. 0.3 mm	note 7
at 25 $\mu$ A	l.w.	approx. 0.4 mm	note 7

## LIMITING VALUES (Absolute maximum rating system)

Final accelerator voltage	$V_{g7(\ell)}$	max. 5 kV	Fig. 6
Shield voltage	$V_{g5}$	max. 2 kV	
First accelerator and astigmatism control voltage	$V_{g2,4}$	max. 2 kV	
Focusing electrode voltage	$V_{g3}$	max. 2 kV	
Control grid voltage	$-V_{g1}$	max. 200 V min. 0 V	
Cathode to heater voltage			
positive	$V_{kf}$	max. 125 V	
negative	$-V_{kf}$	max. 125 V	
Heater voltage	$V_f$	max. 6.6 V min. 6.0 V Optimal 6.15 V $\pm$ 0.5 %	
Voltage between $g_{4,5}$ and any deflection plate	$V_{g4,g5,x,y}$	max. 500 V	
Grid drive, averaged over 1 ms	$V_d$	max. 25 V	
Screen dissipation	$W_s$	max. 8 mW/cm <sup>2</sup>	
Control grid circuit resistance	$R_{g1}$	max. 1 M $\Omega$	

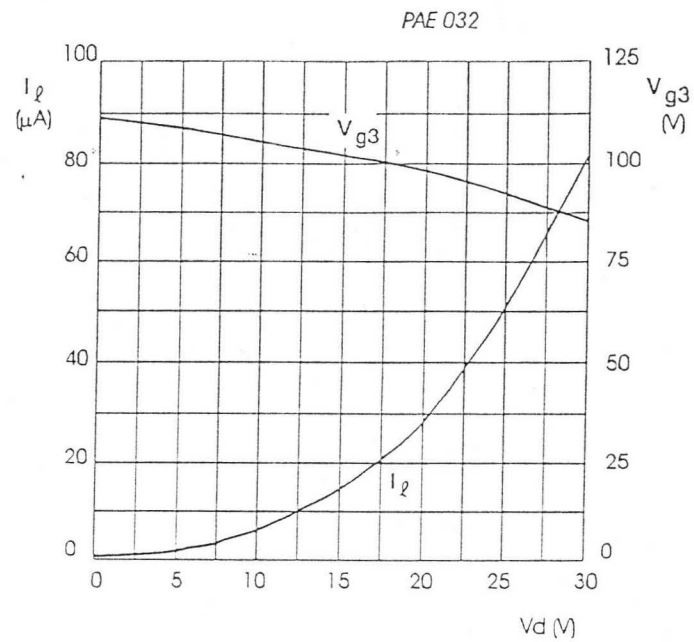


Fig.5 Screen current ( $I_s$ ) and focusing voltage ( $V_{g3}$ ) as a function of grid drive voltage ( $V_d$ ) at  $V_{g2,g4} = 500$  V; typical curves.

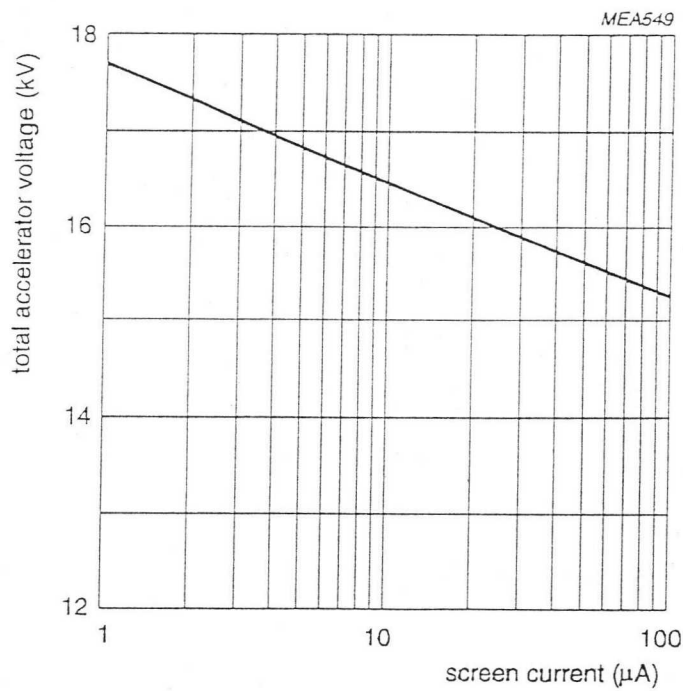


Fig.6 Isoexposure-rate limit curve for 0.5 mR/h, measured in accordance with EIA RS-502.

## NOTES

1. The deflection plates must be operated symmetrically: floating mean x- or y-potentials will result into non-uniform line width and geometry distortion. The mean x- and y-potentials should be equal; under this condition the tube will be within the specification without corrections for astigmatism and geometry (see also note 5).
2. For some applications a mean x-potential up to 50 V positive with respect to mean y-potential is inevitable. In this case  $V_{g5}$  must be made equal to mean x-potential, and a range of 0 to - 25 V with respect to mean y-potential will be required on  $g_{2,4}$  for astigmatism correction. The circuit resistance for  $V_{g_{2,4}}$  should be  $< 10 \text{ k}\Omega$  and  $< 25 \text{ k}\Omega$  for  $V_{g5}$ .
3. The sensitivity at a deflection of less than 75 % of the useful scan will not differ from the sensitivity at a deflection of 25 % of the useful scan by more than the indicated value.
4. The tube is adjusted by internal permanent magnetic elements for optimum geometry (orthogonality, trapezium and barrel/pin-cushion), brightness uniformity, eccentricity of undeflected spot, and astigmatism.
5. A graticule consisting of concentric rectangles of 68 x 54.4 mm and 66.8 x 53.2 mm is aligned with the internal graticule. With optimum trace rotation correction the edges of a raster will fall between these rectangles.
6. The tube has a trace rotation coil, fixed onto the lower cone part. The coil has a maximum resistance of 235  $\Omega$  at 80° C. The maximum required voltage is approx. 6 V for tube tolerances ( $\pm 5^\circ$ ) and earth magnetic field with reasonable shielding ( $\pm 2^\circ$ ).
7. Measured with the shrinking raster method in the centre of the screen under typical operating conditions, adjusted for optimum spot size.

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ECO Number: 97060601 Description: Maatwijziging 10 cm-scherm tbv D10-391GM/125 ← *Scherm D10-391.*  
Created By: KZEP \_ uitgifte nieuw 12NC : 3322 044 01450  
Date: 06/06/97 maat 82 +/- 0,5mm wordt 80 +/- 0,4mm  
(geen ingangscntrole)

Item Number	Description	UM	Rev	Old	New	Start	End
3322 044 01450	10cm scherm tbv 10-391..	St	1	0	1	06/06/97	
DOCUMENTEN	Nieuw/wijziging	P				19/06/97	

End of Report

Master Reference: FV Long Page Comment Data

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Engineering Change Orders FV 1 INTERNE MEDEDELING d.d.: 19-06-1997

\*\*\* VAN: INFO-beheer --- W. Thiessen

\*\*\*

AAN: ACCOORD INZENDER

PRODUCTIE --- M. v.Bageldonk

ENGINEERING --- J. Schols/Roumans

KWALITEIT --- P. Aerssens

LOGISTIC --- H. Kroon

CONTROLLER --- J. Florisse

MARKETING --- K. Zeppenfeld *ZF*

AFWERKING ---

\*\*\*

\*\*\* Betreft: Uitgifte 12NC voor 10cm scherm tbv D10-391GM/125  
Stuklijst inleggen/prijs aanpassing (roll-up)  
Reden : klantvraag/opsluiting in scope-front.

Engineering Change Orders FV 2 \*\*

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End of Report

13.3.1 Product Structure by Item Report  
CRT Heerlen PRODUCTIE

Level	Component Item	Reference	Description	Qty Per UM	Op Ph	SC	Iss	Start	Eff	End	Eff	Scrap L
PARENT	4022 602 00950		ballon gepl.10-391..125	st								
			Rev: 1									
1	1322 510 36402		emaille binder 1.1%	0.00001	1	100						no
			1%									
1	1322 517 98902	fosforspuit.	flu-poeder GH	0.00525	kg	110						no
			1%									
1	1322 526 50501		GLASSMELTPOEDER 019 L91F	0.00045	kg	100						
			3%									
1	3322 044 01450		10cm scherm	1.0	St	150	yes				06/06/97	
			tbv 10-391..									
			Rev: 0									
			1%									
.2	3322 044 01603		glasplaat B270 4 mm	0.14652	kg							
			Rev: 3									
			.0222 st									
1	3322 135 45600		A2-ophangpen	1.0	st	50	yes					
			3%									
.2	3322 135 45403		ophangpen	1.0	st	10						
			Rev: 3									
			1% WORKSHOP 3591b									
1	BBAL10FANTOOM		10cm bolg.ballon fantoom	1.0	st		yes					no
.2	3322 042 07410		emaille frame rond	1.0	st	140	yes					
			Rev: 3									
			1%									
.3	1322 514 30401		glasgranulaat L 91 F *	0.0041	kg	10						no
			Rev: 3									
			8%									
.2	3322 042 07430		emaille frame 10cm	1.0	st	140	yes					
			Rev: 3									
			1%									
.3	1322 514 30401		glasgranulaat L 91 F *	0.0044	kg	10						no
			Rev: 3									
			8%									
.2	3322 048 67110		konus 10 cm gezaagd/geb.	1.0	st	30	yes					
			Rev: 0									
			1%									
.3	3322 056 30202		konus 10cm	1.0	st	10						
			Rev: 2									
			1%									
.2	3322 056 31031		nals *	1.0	st	20						
			Rev: 1									
			1.5%									

End of Report

INSTRUMENT CRT HEERLEN	PROCEDURE ISO9002/par 4.4	KHP-33-92/030 1994-09-05 Pag. 3 van 3
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BIJLAGE 1

WIJZIGINGSVOORSTEL				
CRT Heerlen BV	Voor wijzigingsprocedure zie KHP-33-92-030	Nummer : 97060601	Voorsteller: <i>K. Zeppenfeldt</i>	
Voorstel heeft betrekking op: TYPE: <i>10 cm. scherm voor D10-391. maatwijziging</i>		Afdeling : 33	Datum : <i>6-6-97</i>	
Omschrijving voorstel:  <i>- maat 82 +/- 0.5 wordt 80 +/- 0.4 mm. - uittrekken nieuw 12 me.  - Geen PDS / geen ing. contr. - Structuur inleggen in ITFCPRO door info beher.</i>		Voor gezien:		
		Naam	Par	Afdeling
		<i>V. Spangenberg</i>	<i>[initials]</i>	Productie
		<i>Kroon</i>	<i>[initials]</i>	Logistiek
		<i>Zeppenfeldt</i>	<i>[initials]</i>	Marketing
		<i>Raumann</i>	<i>[initials]</i>	Engineering
		<i>Aerssens</i>	<i>[initials]</i>	Kwaliteits- beheer
				<del>Milieu</del> veiligheid
		<i>Floris</i>	<i>[initials]</i>	Controller
		<i>Thiesse</i>	<i>[initials]</i>	Info beher
Reden wijziging: <i>Opsluiting scoop-front bij klemb</i>		Konsekwentie voor:		
Voor commentaar verzonden d.d.: <i>6-6-97</i> Retour voor d.d.: <i>9-6-97</i>		Prijs bijlage	J <input checked="" type="checkbox"/> N	
		Voorraad checkl.	<input checked="" type="checkbox"/> J N	
		Gereedschap bijlage	J <input type="checkbox"/> N	
		Milieu/ Veiligheid checkl.	<input checked="" type="checkbox"/> J N	
		Ingangscontrole	<input checked="" type="checkbox"/> J N	
		Wijziging aangenomen d.d. <i>9-6-97</i>		
		Par./Naam Quality Manager <i>[Signature]</i>		

Géauthoriseerd:	P. Aerssens	<i>[Signature]</i>	DD: <i>30-9-1994</i>
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