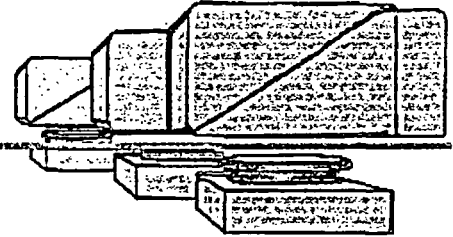


betacontrol of America

PO Box 18 • 425 Route 202 • Towaco, NJ 07082 • Tel.: 973-263-0477 • Fax. 973-263-0477



May 27, 2004

NRC
ATTN.: Nima Ashkeboussi
11555 Rockville
Rockville, MD 20852

Re: Amendment of registration certificate NR-122-D-101-B

Dear Nima,

Per our conversation on May 20, 2004 I am sending you the old drawings of the source housing MK 1.0.

The prototype testing for the new source housing was limited to an endurance test of the mechanical and electrical shutter function. Betacontrol is using in the new source housing all of the mechanical and electrical parts, which were used in the old source housing. Also both source housings are made out of steel with the same thickness.

There have been no changes to the existing registration certificate and quality assurance program.

Our European customers are already using the new source housing MK 1.0. The new source housing is showing the same reliability as the old source housing.

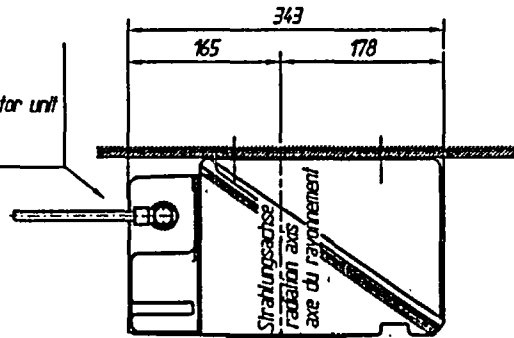
I thank you for assisting me in this matter.

If you have any questions, please feel free to call me.

Best regards,

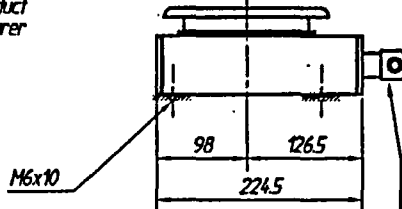
Markus Hannig
Manager
Sales & Service

Steckeranschluß für
Defektoreinheit
plug connection for detector unit
connexion par fiche pour
bloc détecteur

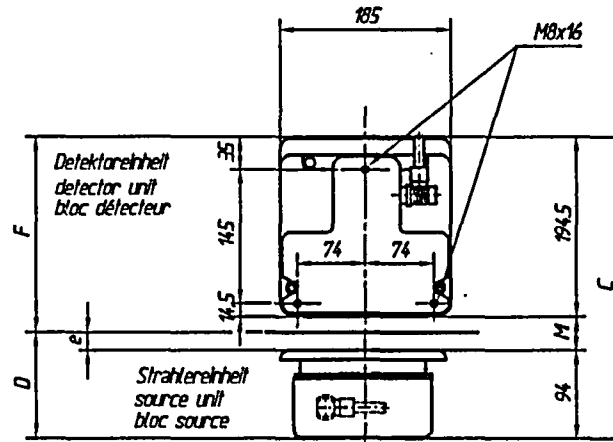
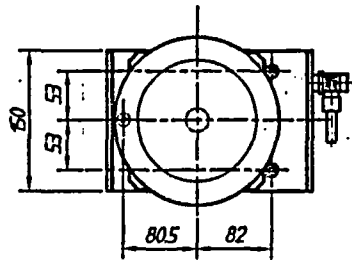
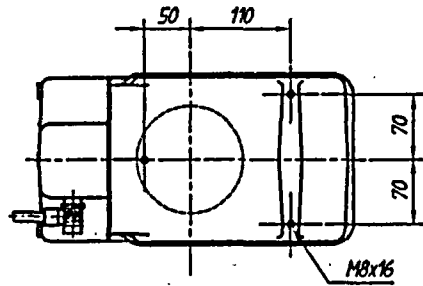


Meßgut

measuring product
produit à mesurer



Steckeranschluß für
Strahlereinheit
plug connection for source unit
connexion par fiche pour bloc source



XIII	9.5	298	4	98	200
XII	40	328.5	20	114	234.5
XI	15	303.5	6	100	209.5
X.	400	688.5	10	104	584.5
IX	450	738.5	10	104	634.5
VIII	103	391.5	10	104	287.5
VII	50	338.5	10	104	234.5
VI	9.5	298	6	100	198
V	20	308.5	10	104	214.5
IV	33.5	623.5	10	104	519.5
III	23.5	523.5	10	104	419.5
II	72.5	361	37	131	230
I	33	321.5	10	104	217.5
Varianter variant variante	M Meßspalt measuring gap fente de mesure	C	e	D	F
Maße / dimensions / dimensions					

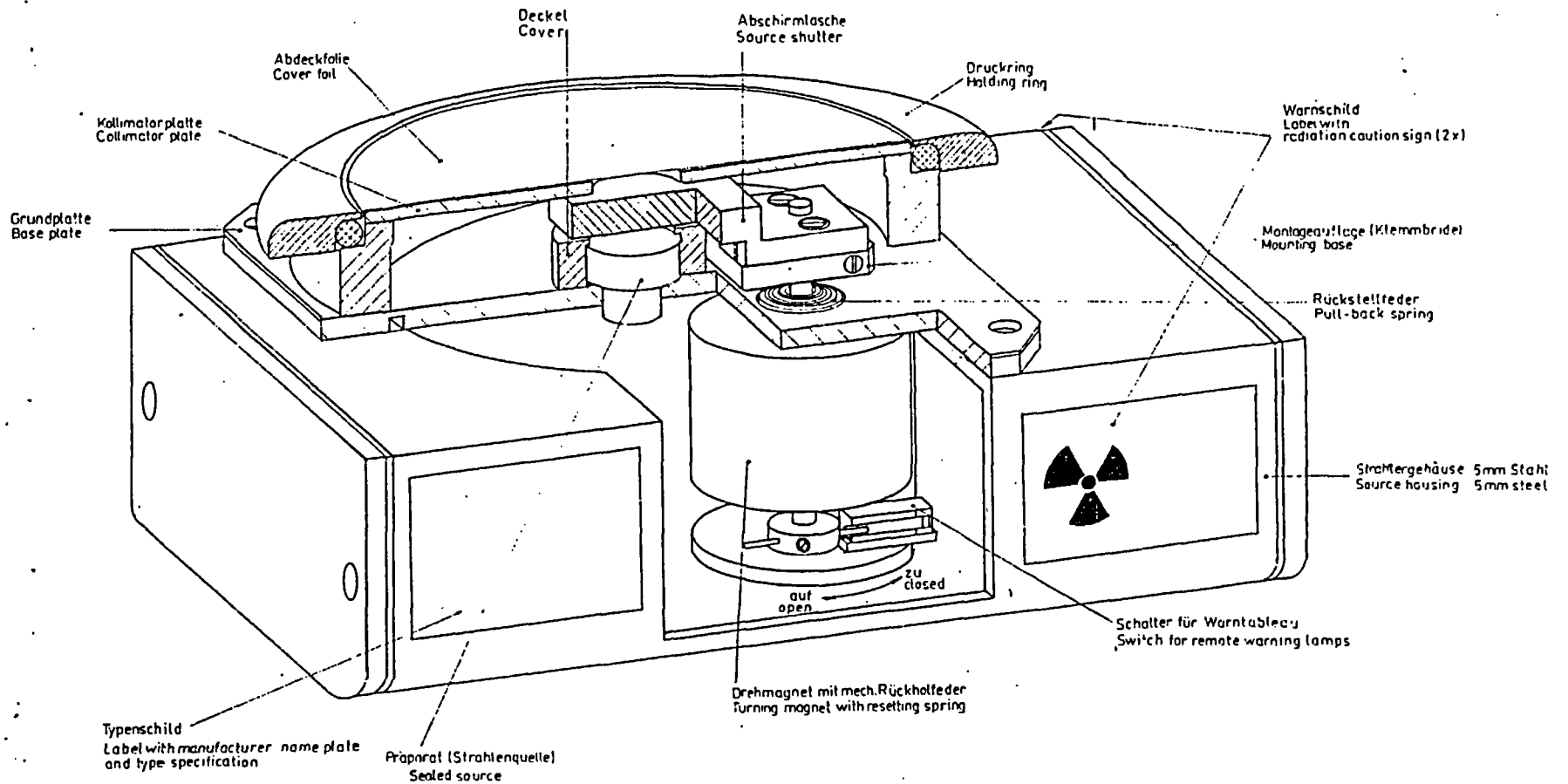
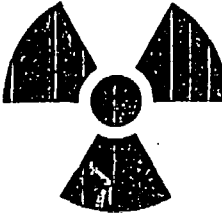
Nr.	Änderung	Datum	Name
"d"	Variante XIII nachgetragen	29.04.03	Saß
"c"	Variante XII nachgetragen u. auf kleiner Stecker geändert	17.01.2001	Sitzlzel
"b"	Variante XI nachgetragen	27.1.99	Saß

Gezeichnet	Datum	Name	Das Wiederrecht in dieser Zeichnung gehört dem Luft-Bundesamt für Herstellung oder Verbreitung an. Toute Permission, réimpression ou tirage est formellement interdite.
Geprüft	24.07.1995	Barthel	
	27.01.99	Saß	

betacontrol

Meßstab	1.5	Meßfühler BC-MK 10 measuring sensor BC-MK 10 jauge BC-MK 10	700-103-559/3 d
---------	-----	---	-----------------

Ersatz für : 700-103-160/3

**CAUTION
RADIOACTIVE MATERIAL**

ISOTOPE

ACTIVITY

DATE

HALF LIFE

betacontrol
geräte nach DIN EN 60335-1
 D-5905 FREUDENBERG

Type Bezeichnung

Fabrik-Nr. Kontroll-Nr.

Made in Western Germany

Datum _____ Name _____		Das Urhörschild an dieser Zeichnung gehört uns. Jede Vervielfältigung oder Nachbildung ist ohne unseren schriftlichen Auftrag strafbar.	betacontrol gmbh D-5905 Freudenberg	
Gezeichnet 21.6.90	<i>[Signature]</i>			
Geprüft _____	Modellnr. 711		700-3241/3	
Strahlereinheit Source housing bloc émetteur			Ersetzt für _____ Ersetzt durch _____	

Labelling:

Two labels are visibly fitted.

The first label is made of aluminium and states:

- manufacturer's name
- type of source housing and year of construction
- apparatus and job number

betacontrol
D-5905 FREUDENBERG
Type Baujahr
Fabr.Nr. Kom.Nr.

Made in Western Germany

← ORIGINAL
AFFIXED
TO DWG#
700-3241-3

The second label is fitted on the 2 opposite sides of the source housing each. It is made of aluminium and states:

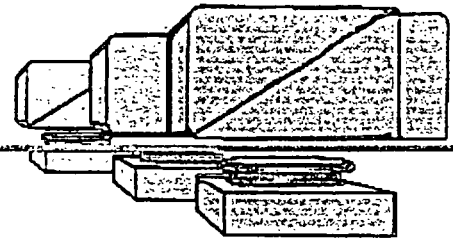
- radiation caution sign
- isotope name and atomic number
- activity
- date of delivery
- half life

ORIGINAL →
AFFIXED
TO DWG#
700-3241-3

CAUTION
RADIOACTIVE MATERIAL
ISOTOPE
ACTIVITY
DATE
HALF LIFE

betacontrol  **of America**

PO Box 18 • 425 Route 202 • Towaco, NJ 07082 • Tel.: 973-263-0477 • Fax. 973-263-0477



May 26, 2004

NRC
ATTN.: Nima Ashkeboussi
11555 Rockville
Rockville, MD 20852

Re: Amendment of registration certificate NR-122-D-101-B

Dear Nima,

Betacontrol improved the device MK 1.0. In appliance with NRC regulations we submit the new drawings for your records.

With the modifications we want to keep our product up to date with the needs of our customers and in maintaining exposures "as low as is reasonably achievable" ALARA.

Attached please find the new drawings.

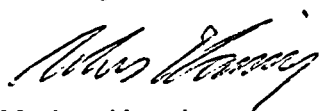
I also ask you kindly to update your files in the matter of the distributor address:

Betacontrol of America
P.O. Box 18
425 Route 202
Towaco, NJ 07082

The ownership has not changed. Betacontrol of America only relocated their office.

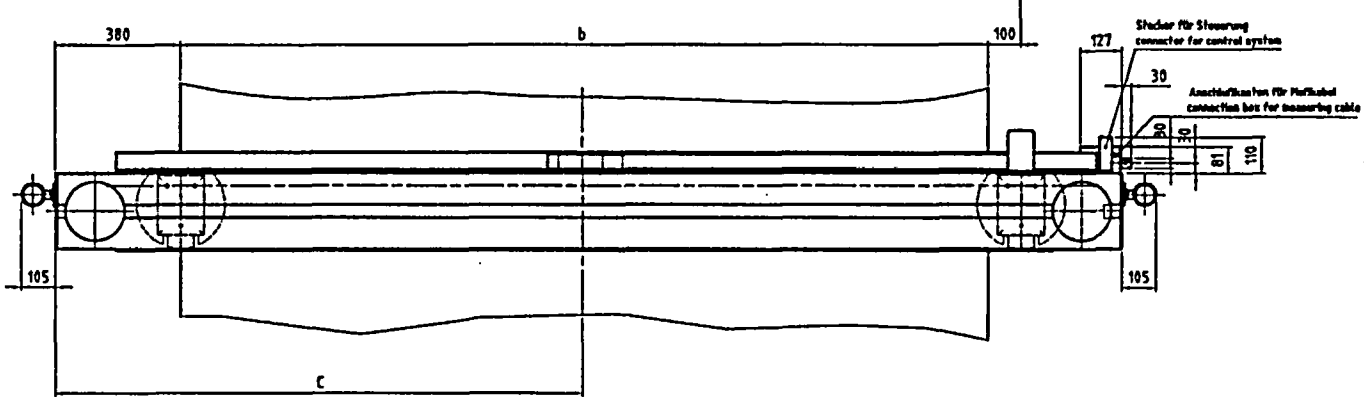
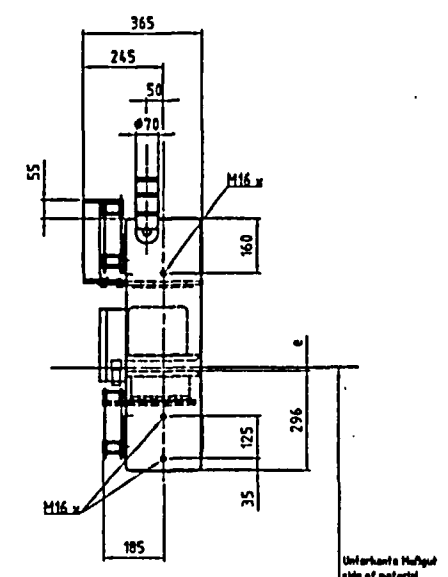
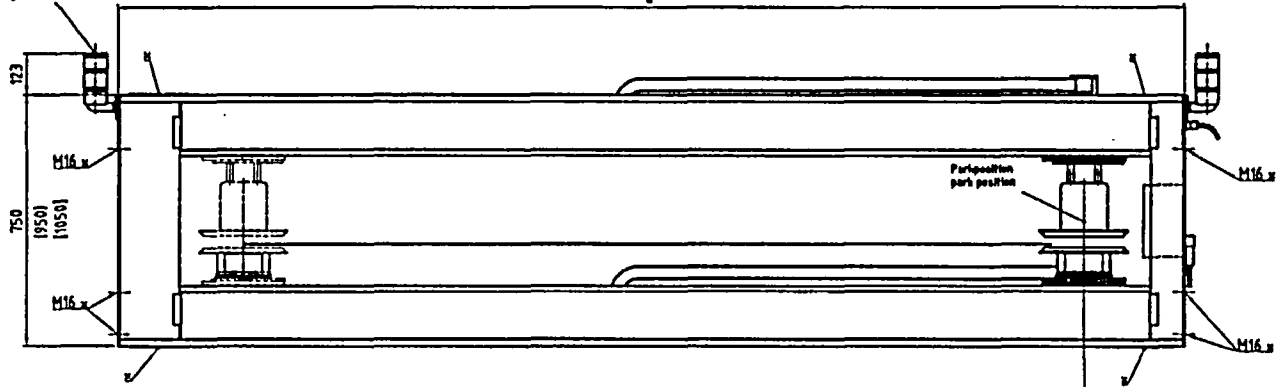
If you need any additional information, please feel free to call me.

Best regards,



Markus Hannig
Manager
Sales & Service

Spezial-
vering device



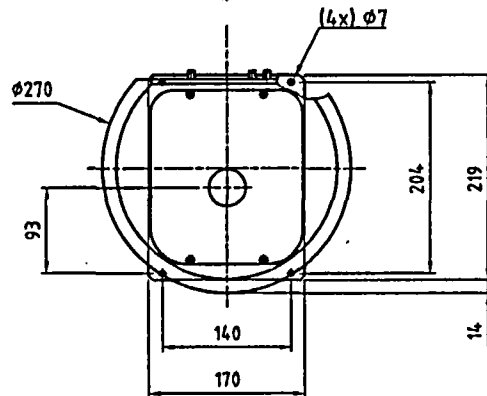
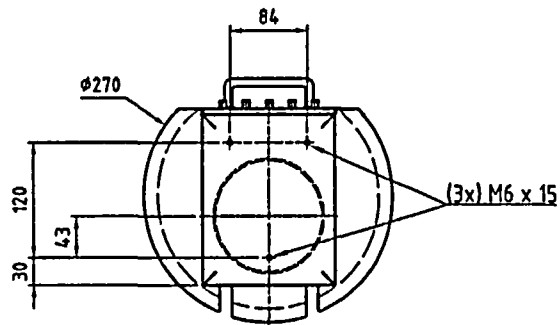
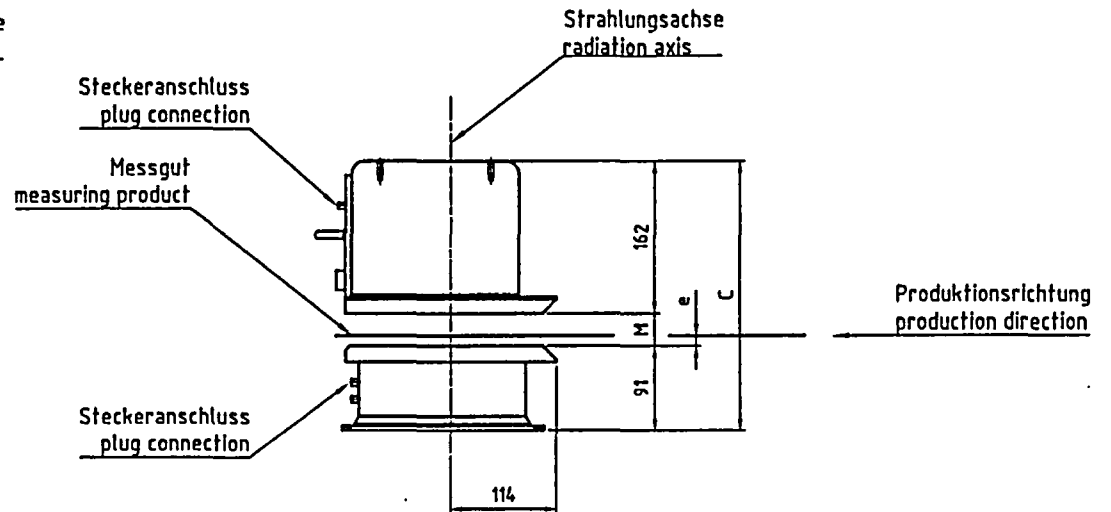
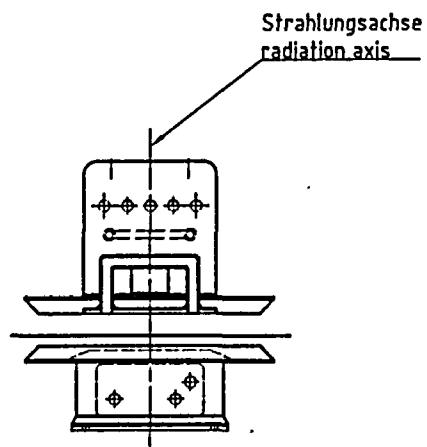
Traversengröße travelling table		1	2	3	4	5	6
Gesamtbreite total width	a	1740	2250	2760	3270	3780	4290
n max. Maßgutbreite max. material width	b	950	1460	1970	2480	2990	3500
Mitte Maßgut middle material	c	855	1110	1365	1620	1875	2130
wird von Betacontrol festgelegt determined by betacontrol	e						

= Befestigungs - Bohrungen
mounting holes
trous de montage

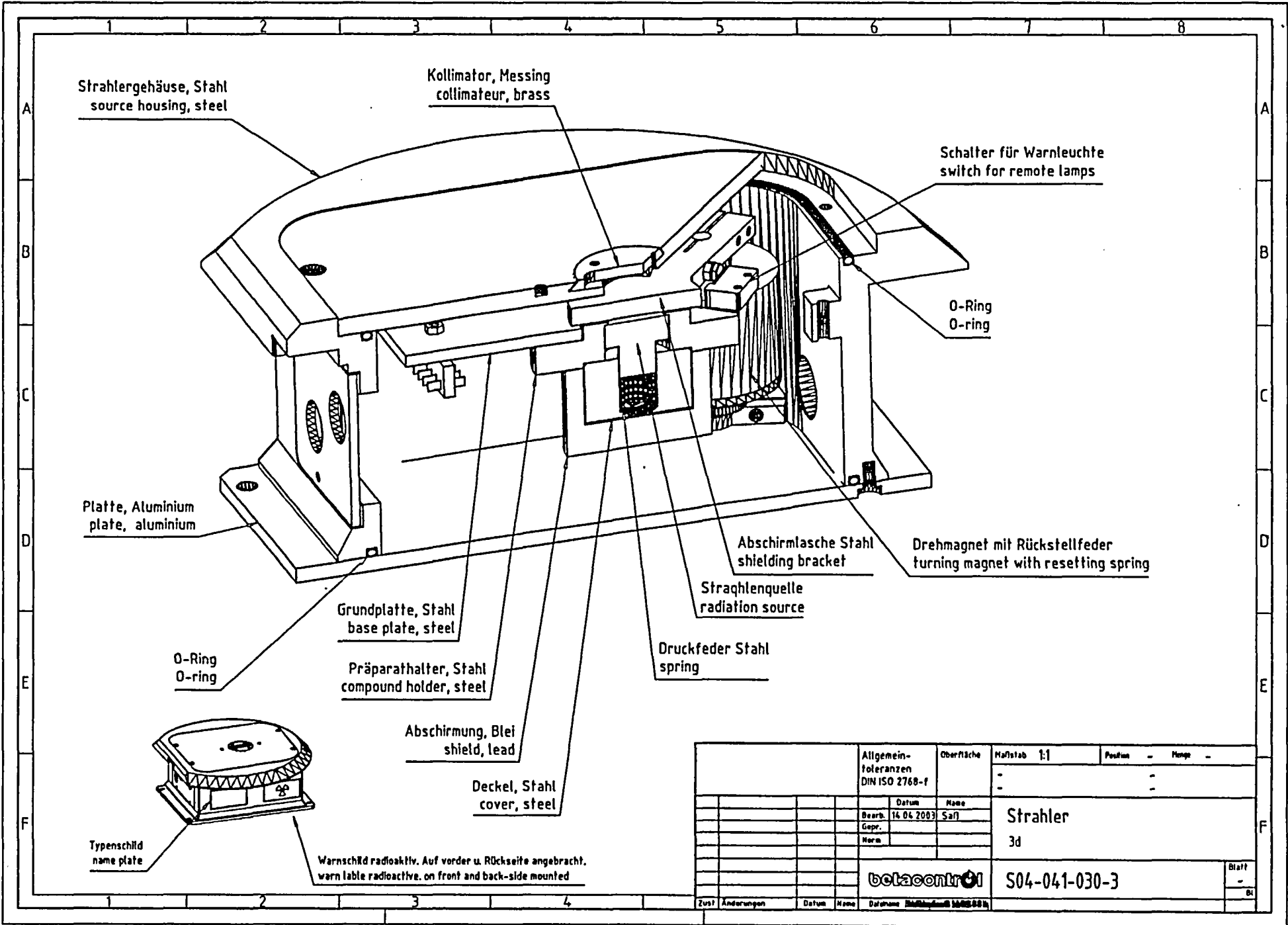
* Wartungsöffnung freihalten
Opening for service to be kept free

Allgemein- Information DIN 150 2769-1		Übersicht	Maßstab 1:10	Positiv	Impf
Zeichn.	01.04.2007	5/01			
Gepr.	03.04.2007	5/01			
Herz.					
betacontrol			700-010-590/2		Blatt 1 von 1

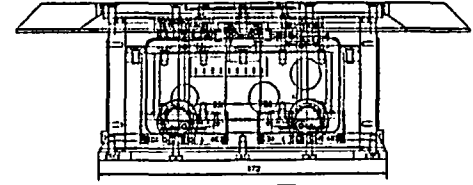
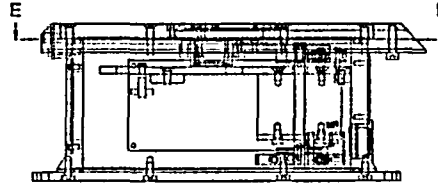
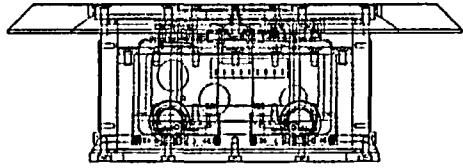
Maßbild für Traverse
dimension drawing o-frame



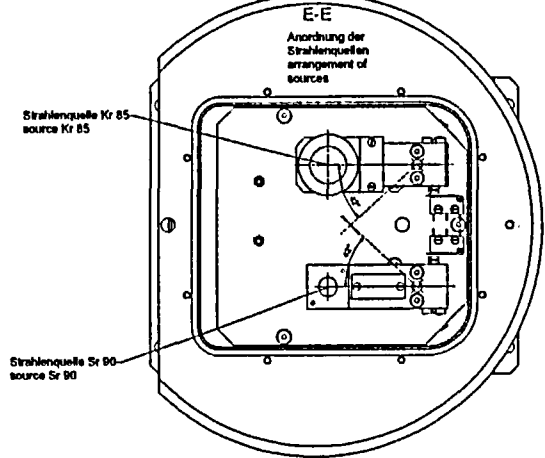
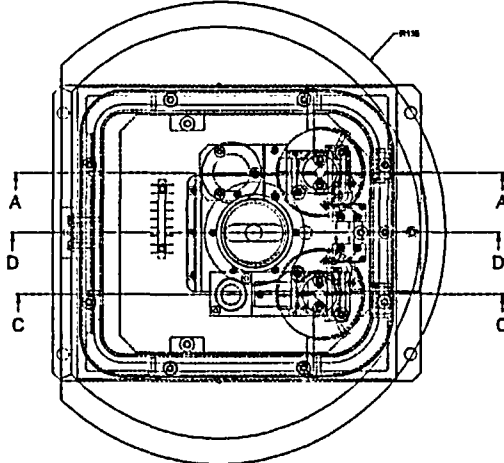
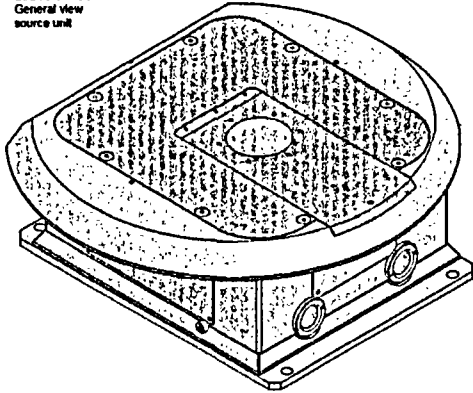
2	33	10	286		
1	10	6	263		
Variante variant	M	e	C		
	Messspalt measuring gap				
		Allgemein- toleranzen DIN ISO 2768-f	Oberfläche	Maßstab 1:5	Position - Menge -
				-	-
		Datum	Name	Sensor	
		Bearb. 04.07.2003	Saß.		
		Gepr.			
		Norm			
		betacontrol		Sensor	
				sensor	
				S01-103-001-3	
Zust.	Änderungen	Datum	Name	Blatt	
				- 01	



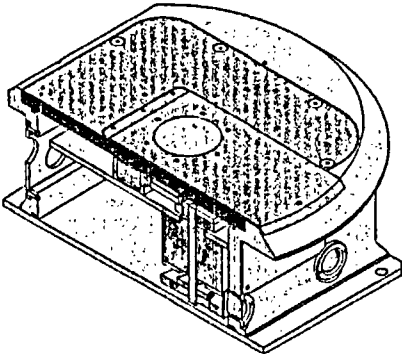
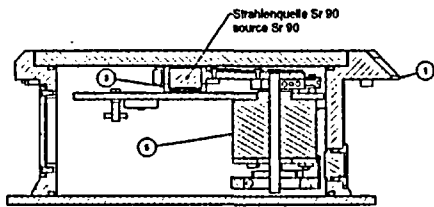
Allgemeintoleranzen DIN ISO 2768-f		Oberfläche	Maßstab 1:1	Position - Menge -
Datum		Name	-	
Bearb.	14.06.2003	Saß	Strahler	
Gepr.			3d	
Norm				
betacontrol			S04-041-030-3	Blatt -
Zust	Änderungen	Datum	Name	Datum



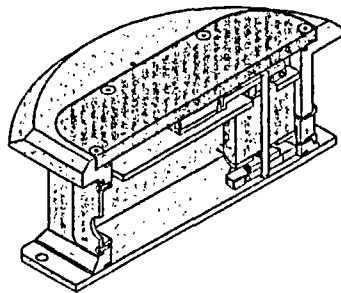
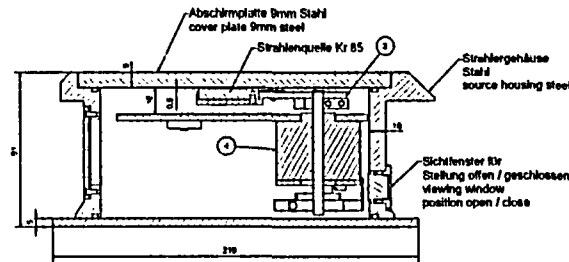
Gesamtsicht
Strahlereinheit
General view
source unit



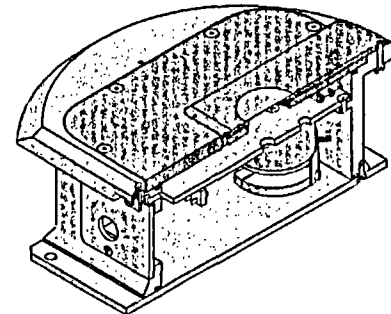
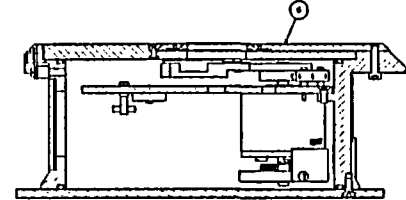
C-C



A-A

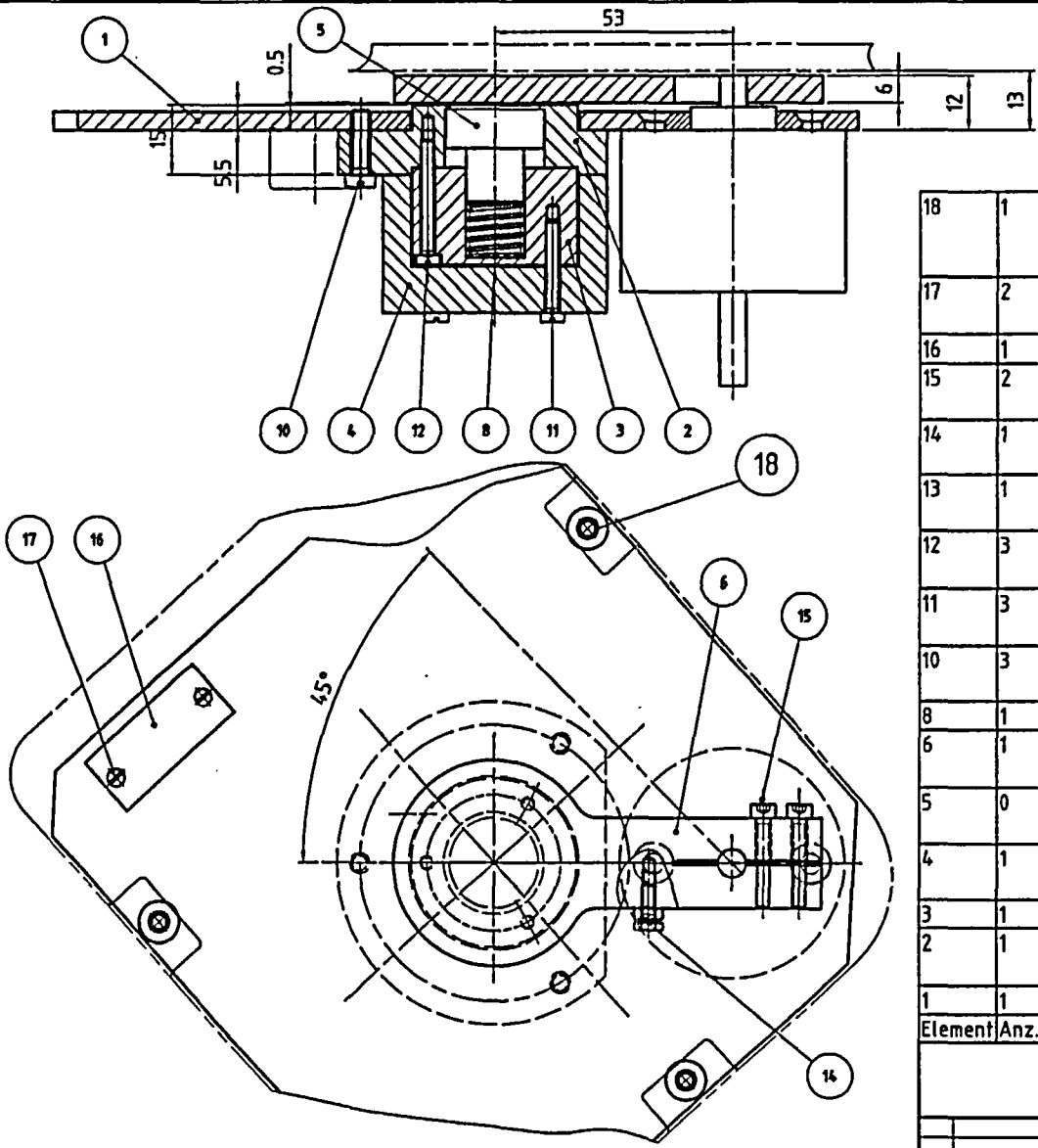


D-D

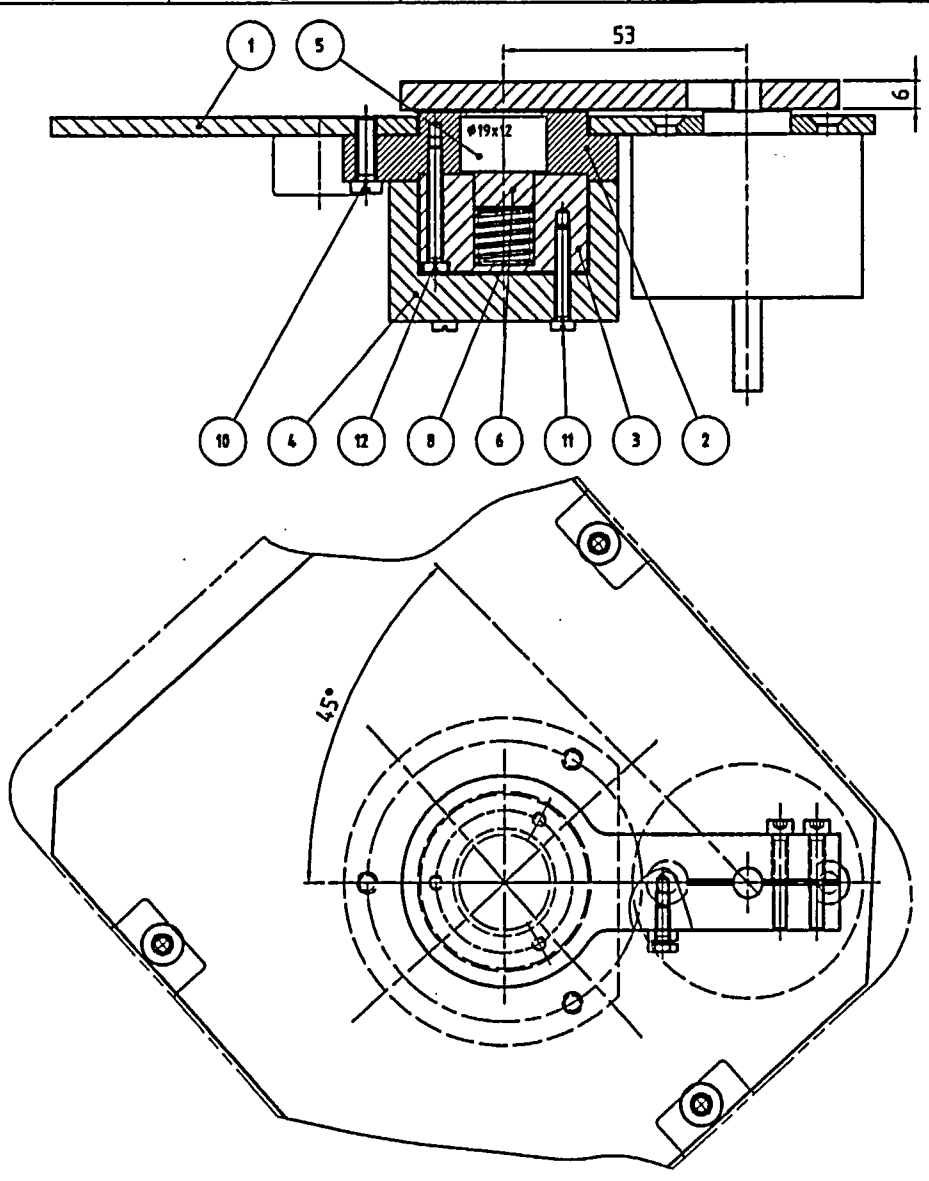


QTY	ANZA	BAUTEILE NR	BAUFR	ANZEIGEN	BRUCH	RECHEN	WECHSEL	WECHSEL
1	1	SD4-41012-1						
1	1	SD4-41012-2						
1	1	SD4-41012-3						
1	1	SD4-41012-4						
1	1	SD4-41012-5						
1	1	SD4-41012-6						
1	1	SD4-41012-7						
1	1	SD4-41012-8						
1	1	SD4-41012-9						
1	1	SD4-41012-10						
1	1	SD4-41012-11						
1	1	SD4-41012-12						
1	1	SD4-41012-13						
1	1	SD4-41012-14						
1	1	SD4-41012-15						
1	1	SD4-41012-16						
1	1	SD4-41012-17						
1	1	SD4-41012-18						
1	1	SD4-41012-19						
1	1	SD4-41012-20						
1	1	SD4-41012-21						
1	1	SD4-41012-22						
1	1	SD4-41012-23						
1	1	SD4-41012-24						
1	1	SD4-41012-25						
1	1	SD4-41012-26						
1	1	SD4-41012-27						
1	1	SD4-41012-28						
1	1	SD4-41012-29						
1	1	SD4-41012-30						
1	1	SD4-41012-31						
1	1	SD4-41012-32						
1	1	SD4-41012-33						
1	1	SD4-41012-34						
1	1	SD4-41012-35						
1	1	SD4-41012-36						
1	1	SD4-41012-37						
1	1	SD4-41012-38						
1	1	SD4-41012-39						
1	1	SD4-41012-40						
1	1	SD4-41012-41						
1	1	SD4-41012-42						
1	1	SD4-41012-43						
1	1	SD4-41012-44						
1	1	SD4-41012-45						
1	1	SD4-41012-46						
1	1	SD4-41012-47						
1	1	SD4-41012-48						
1	1	SD4-41012-49						
1	1	SD4-41012-50						
1	1	SD4-41012-51						
1	1	SD4-41012-52						
1	1	SD4-41012-53						
1	1	SD4-41012-54						
1	1	SD4-41012-55						
1	1	SD4-41012-56						
1	1	SD4-41012-57						
1	1	SD4-41012-58						
1	1	SD4-41012-59						
1	1	SD4-41012-60						
1	1	SD4-41012-61						
1	1	SD4-41012-62						
1	1	SD4-41012-63						
1	1	SD4-41012-64						
1	1	SD4-41012-65						
1	1	SD4-41012-66						
1	1	SD4-41012-67						
1	1	SD4-41012-68						
1	1	SD4-41012-69						
1	1	SD4-41012-70						
1	1	SD4-41012-71						
1	1	SD4-41012-72						
1	1	SD4-41012-73						
1	1	SD4-41012-74						
1	1	SD4-41012-75						
1	1	SD4-41012-76						
1	1	SD4-41012-77						
1	1	SD4-41012-78						
1	1	SD4-41012-79						
1	1	SD4-41012-80						
1	1	SD4-41012-81						
1	1	SD4-41012-82						
1	1	SD4-41012-83						
1	1	SD4-41012-84						
1	1	SD4-41012-85						
1	1	SD4-41012-86						
1	1	SD4-41012-87						
1	1	SD4-41012-88						
1	1	SD4-41012-89						
1	1	SD4-41012-90						
1	1	SD4-41012-91						
1	1	SD4-41012-92						
1	1	SD4-41012-93						
1	1	SD4-41012-94						
1	1	SD4-41012-95						
1	1	SD4-41012-96						
1	1	SD4-41012-97						
1	1	SD4-41012-98						
1	1	SD4-41012-99						
1	1	SD4-41012-100						

Strahler / irradiator
3 Borehole / 3 ranges
SD4-41012

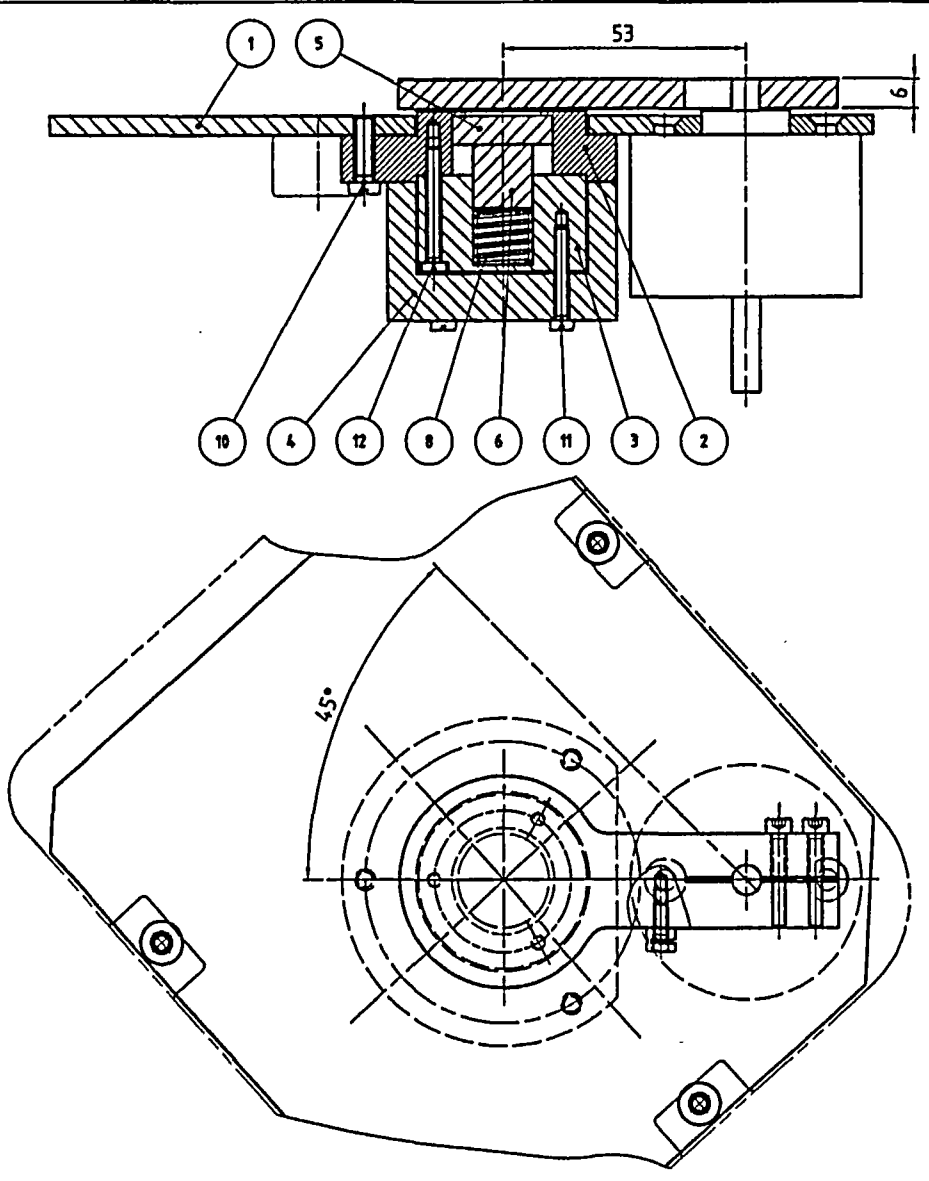


18	1	Innensechskantschraube mit Senkkopf __ Allen countersunk screw	ISO 10642 - M4 x 12	A2	
17	2	Zylinderschraube mit Schlitz __ Fillister head screw	DIN 912- M2 x 4	A2	
16	1	Schild Name plate	700-052-025/4	A2	
15	2	Zylinderschraube __ Allen head screw	DIN 912 - M3 x 20	A2	
14	1	Sechskantschraube __ Hex head screw	DIN 933 - M3 x 8	A2	
13	1	Sechskantmutter __ Hex head screw	DIN 934 - M3	A2	
12	3	Zylinderschraube mit Schlitz __ Fillister head screw	ISO 1207 - M3 x 25	A2	
11	3	Zylinderschraube mit Schlitz __ Fillister head screw	ISO 1207 - M3 x 20	A2	
10	3	Zylinderschraube mit Schlitz __ Fillister head screw	ISO 1207 - M4 x 14	A2	
8	1	Druckfeder Spring	VD-179K	1.4310	
6	1	Abschirmflasche __ Shielding bracket	S04-052-014-4	S235JR	
5	0	Strahlenquelle __ Radiation source	X.1114		
4	1	Bleiabschirmung __ Shielding bracket	S04-052-009-4	Pb	
3	1	Deckel Cover	S04-052-008-4	S235JR	
2	1	Präparathalter oben __ Compound holder	S04-052-005-4	S235JR	
1	1	Grundplatte Base plate	S04-041-024-3	S235JR	
Element		Anz.	Beschreibung	Standard	Material
			Allgemeintoleranzen DIN ISO 2768-r	Oberfläche	Maßstab 1:1
				Position	- Menge -
			Datum	Name	
			Bearb. 11.02.2003	Saß	Strahlerabschirmung Kr. 85 shielding Sr 90
			Gepr. 11.02.03	Pioch	
			Norm		
			betacontrol		S04-52001-3
Zust. Änderungen		Datum	Name	Dateiname	Blatt
					-
					01




12	3	Zylinderschraube mit Schlitz	Fillister head screw	ISO 1207 - M3 x 25
11	3	Zylinderschraube mit Schlitz	Fillister head screw	ISO 1207 - M3 x 20
10	3	Zylinderschraube mit Schlitz	Fillister head screw	ISO 1207 - M4 x 14
8	1	Druckfeder	Spring	VD-179K
6	1	Druckstange	Spacer	S04-052-010/4
5	0	Strahlenquelle	Radiation source	X.117
4	1	Bleiabschirmung	Shield	S04-052-009-4
3	1	Deckel	Cover	S04-052-008-4
2	1	Präparathalter oben	Compound holder	S04-052-006-4
1	1	Grundplatte	Base plate	S04-041-024-3
Element/Anz./Beschreibung			Material	Standard

Allgemein-toleranzen DIN ISO 2768-f		Oberfläche		Maßstab 1:1	Position - Menge -
				-	-
	Datum	Name		Strahlerabschirmung Sr 90 shielding Sr 90	
	Bearb. 11.02.2003	Saßl.			
	Gepr. 18.02.03	Weber			
	Norm				
betacontrol				S04-52005-3	Blatt -
Zust	Änderungen	Datum	Name	Datenname	Blatt Nr.

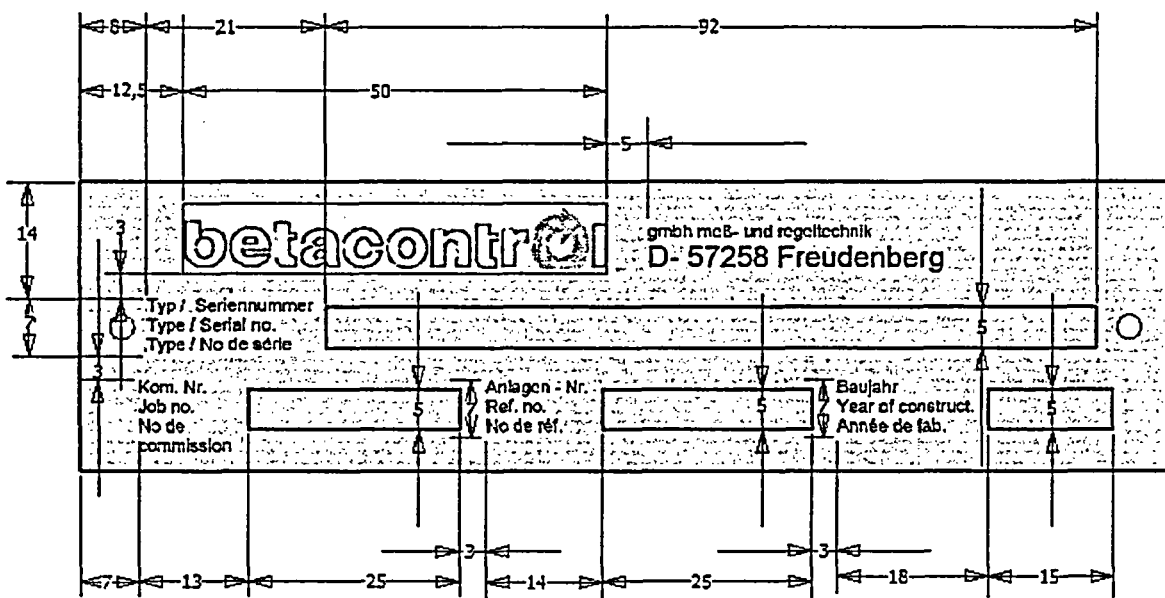
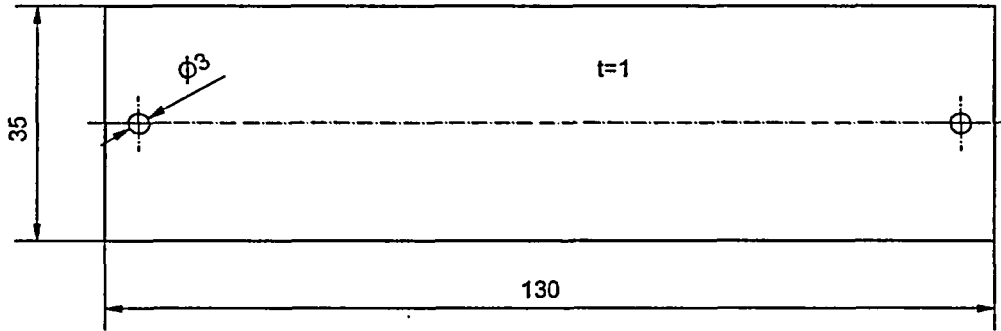



12	3	Zylinderschraube mit Schlitz	Fillister head screw	ISO 1207 - M3 x 25
11	3	Zylinderschraube mit Schlitz	Fillister head screw	ISO 1207 - M3 x 20
10	3	Zylinderschraube mit Schlitz	Fillister head screw	ISO 1207 - M4 x 14
8	1	Druckfeder	Spring	VD-179K
6	1	Druckstange	Spacer	S04-052-010/4
5	0	Strahlenquelle	Radiation source	
4	1	Bleiabschirmung	Shield	S04-052-009-4
3	1	Deckel	Cover	S04-052-008-4
2	1	Präparathalter oben	Compound holder	S04-052-006-4
1	1	Grundplatte	Base plate	S04-041-024-3
Element/Anz./Beschreibung			Material	Standard

Allgemeintoleranzen DIN ISO 2768-f		Oberfläche		Maßstab 1:1	Position - Menge -
				-	-
	Datum	Name		Strahlerabschirmung Am 241 / Pm 147 shielding Am 241 / Pm 147	
	Bearb. 11.02.2003	Saß			
	Gepr. 18.02.03	Weber			
	Norm				
betacontrol				S04-52007-3	Blatt - BK
Zust.	Änderungen	Datum	Name	Datenebene	Blatt

	CAUTION
	RADIOACTIVE MATERIAL
	ISOTOPE <input type="text"/>
	NUMBER <input type="text"/>
	ACTIVITY <input type="text"/>
	DATE <input type="text"/>
	HALF LIFE <input type="text"/>





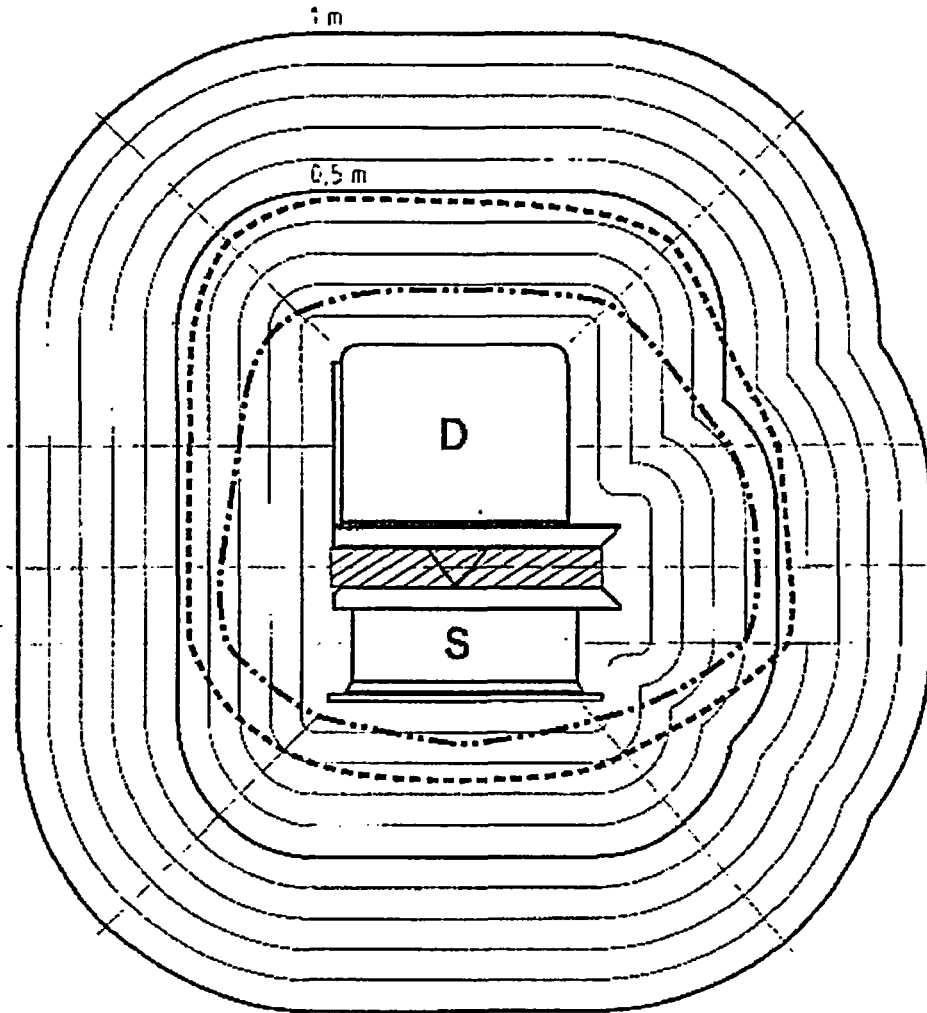
		Allgemein-toleranzen DIN ISO 2768-f		AIMg3		
		Datum	Name	Typenschild Messkopf		
		Gezeichnete	31.03.2004			Saß
		Kontrollieren				
		Norm				
					S04-041-052	
					1 A4	
Status	Änderungen	Datum	Name			



Isodosiskurven / isodose curves nach DIN 412-1

Strahler im Messbetrieb / source unshielded

Seitliche Ansicht
side view



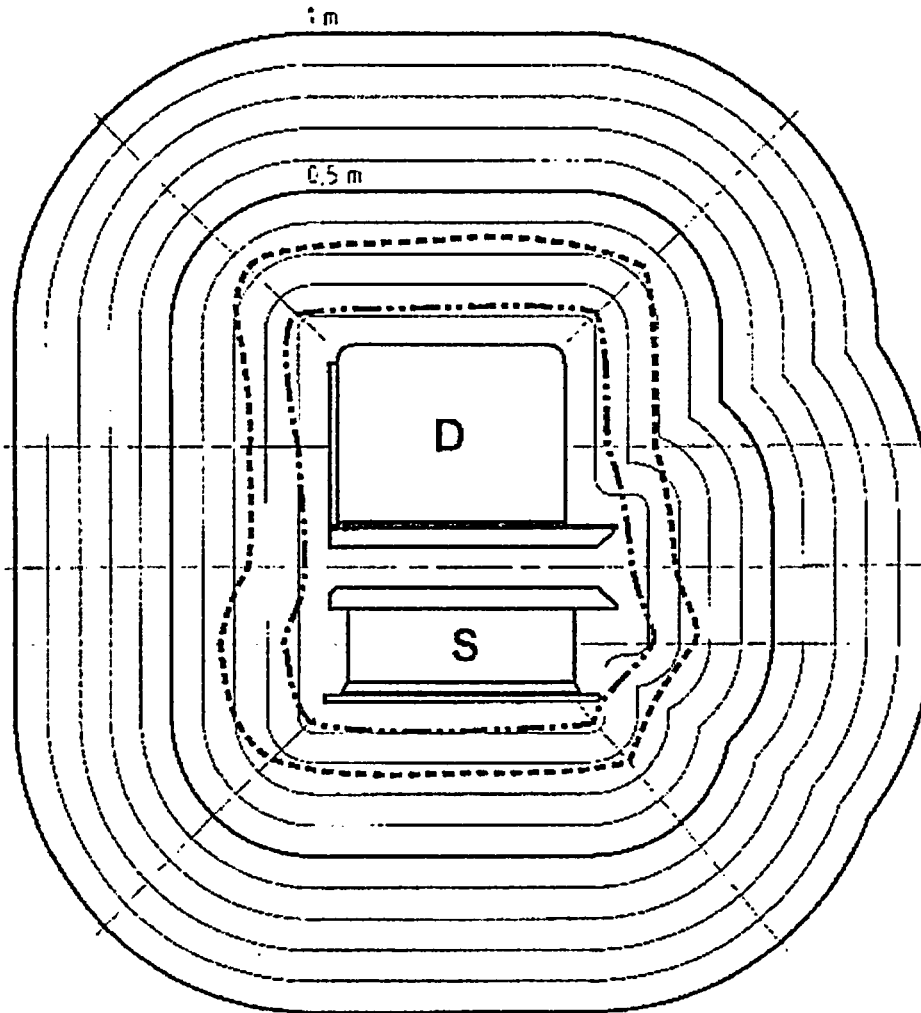
--- 7,5 µSv/h
- - - 2,5 µSv/h

Isotop: Kr85 isotope	Messspalt: 10 mm meas. gap	Strahlertyp: X1114 type
Aktivität: 3,7 GBq activity	Kollimator: Schlitz 10 x 35 mm slotted collimator	Kr85-3,7-10-01 Bl. 1
Messgerät: babyline		

Isodosiskurven / isodose curves nach DIN 412-1

Strahler *abgeschirmt* / source *shielded*

Seitliche Ansicht
side view



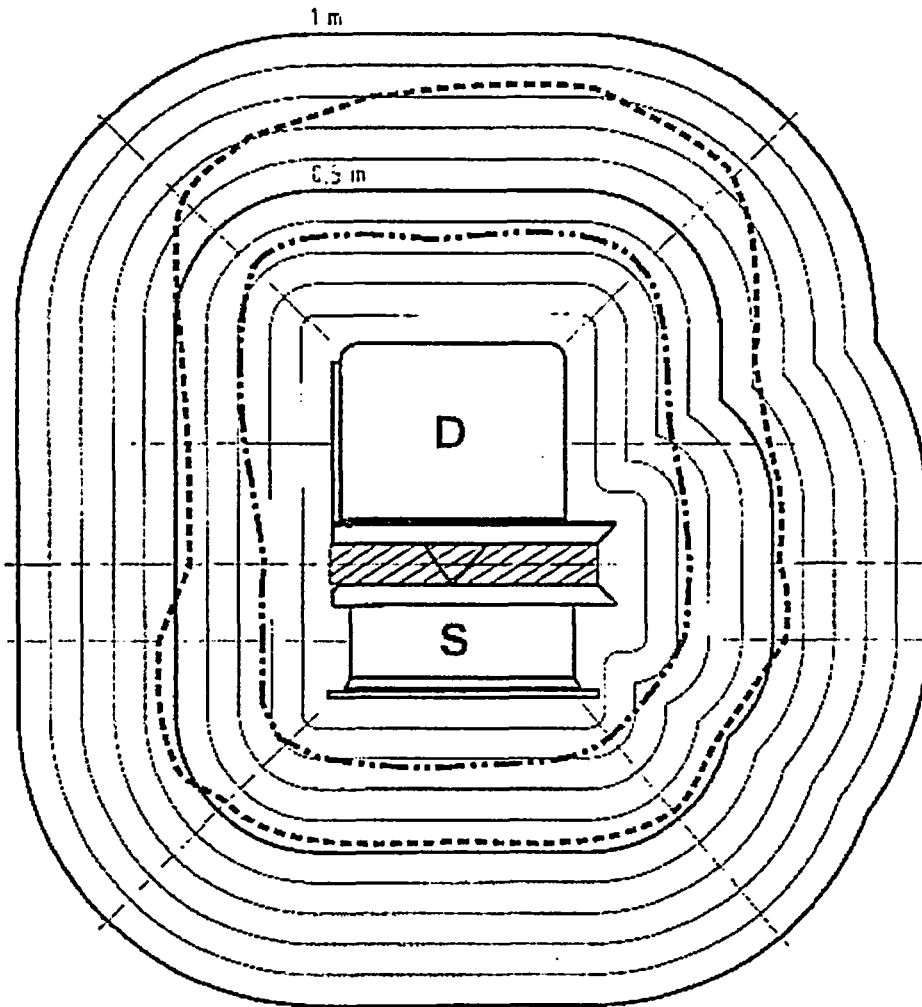
----- 7,5 µSv/h
 - - - - - 2,5 µSv/h

Isotop: Kr85 isotope	Messspalt: 10 mm meas. gap	Strahlertyp: X1114 type
Aktivität: 3,7 GBq activity	Kollimator: Schlitz 10 x 35 mm slotted collimator	Kr85-3,7-10-01 Bl. 2
Messgerät: babyline		

Isodosiskurven / isodose curves nach DIN 412-1

Strahler im *Messbetrieb* / source *unshielded*

seitliche Ansicht
side view



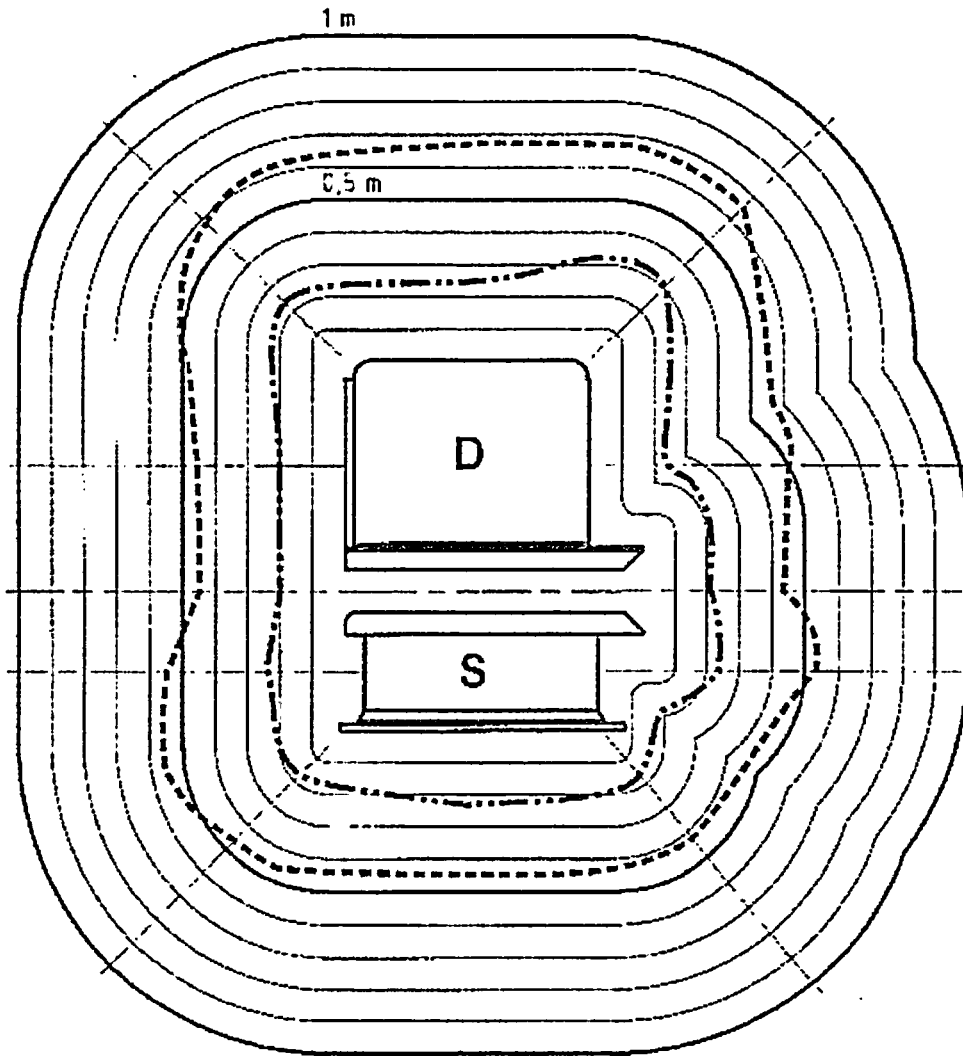
····· 7,5 µSv/h
- - - 2,5 µSv/h

Isotop: Kr85 isotope	Messspalt: 10 mm meas. gap	Strahlertyp: X1114 type
Aktivität: 9,9 GBq activity	Kollimator: Schlitz 10 x 35 mm slotted collimator	Kr85-9,9-10-01 Bl. 1
Meßgerät: babyline		

Isodosiskurven / isodose curves nach DIN 412-1

Strahler *abgeschirmt* / source *shielded*

seitliche Ansicht
side view



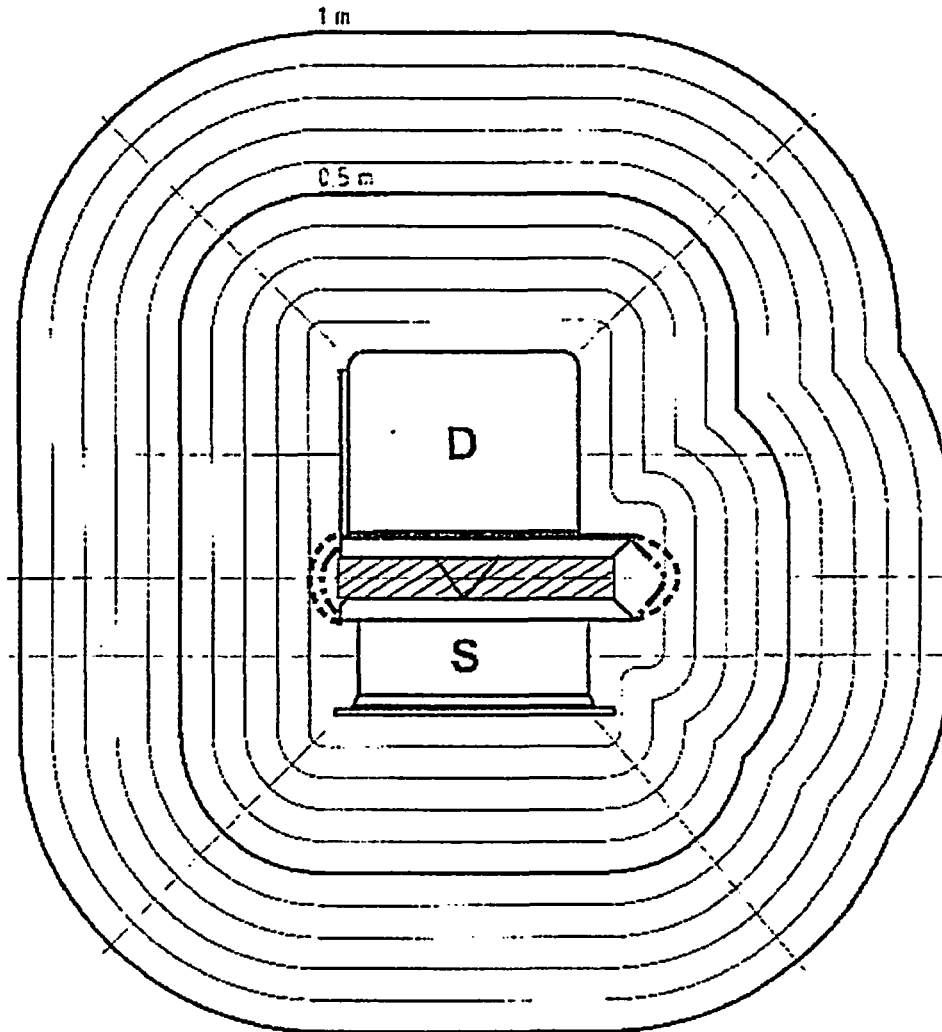
— · — · — · 7,5 µSv/h
- - - - - 2,5 µSv/h

Isotop: Kr85 isotope	Messspalt: 10 mm meas. gap	Strahlertyp: X1114 type
Aktivität: 9,9 GBq activity	Kollimator: Schlitz 10 x 35 mm slotted collimator	Kr85-9,9-10-01 Bl. 2
Meßgerät: babyline		

Isodosiskurven / isodose curves nach DIN 412-1

Strahler im Messbetrieb / source unshielded

Seitliche Ansicht
side view



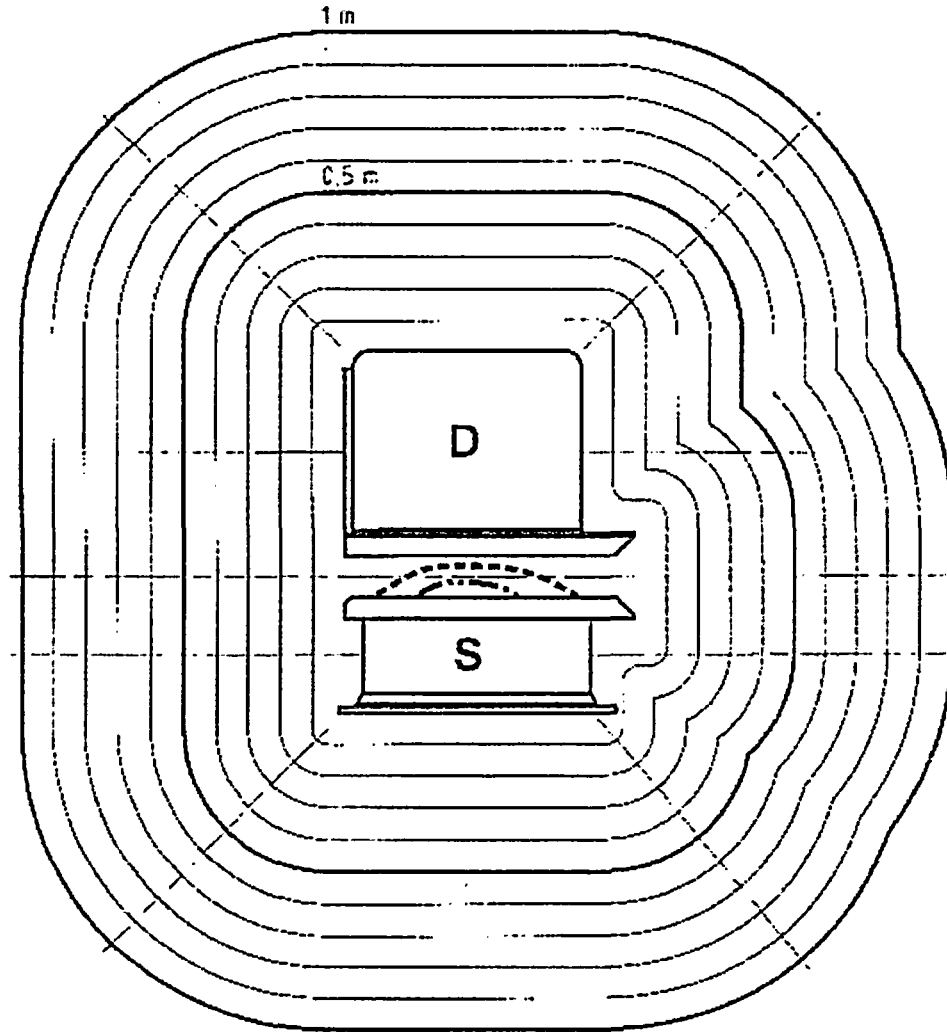
····· 7,5 µSv/h
----- 2,5 µSv/h

Isotop: Pm147 isotope	Messspalt: 10 mm meas. gap	Strahlertyp: VZ-464 type
Aktivität: 18,5 GBq activity	Kollimator: Rund slotted collimator	Pm147-18.5-10-01 Bl. 1
Messgerät: babyline		

Isodosiskurven / isodose curves nach DIN 412-1

Strahler *abgeschirmt* / source *shielded*

Seitliche Ansicht
side view



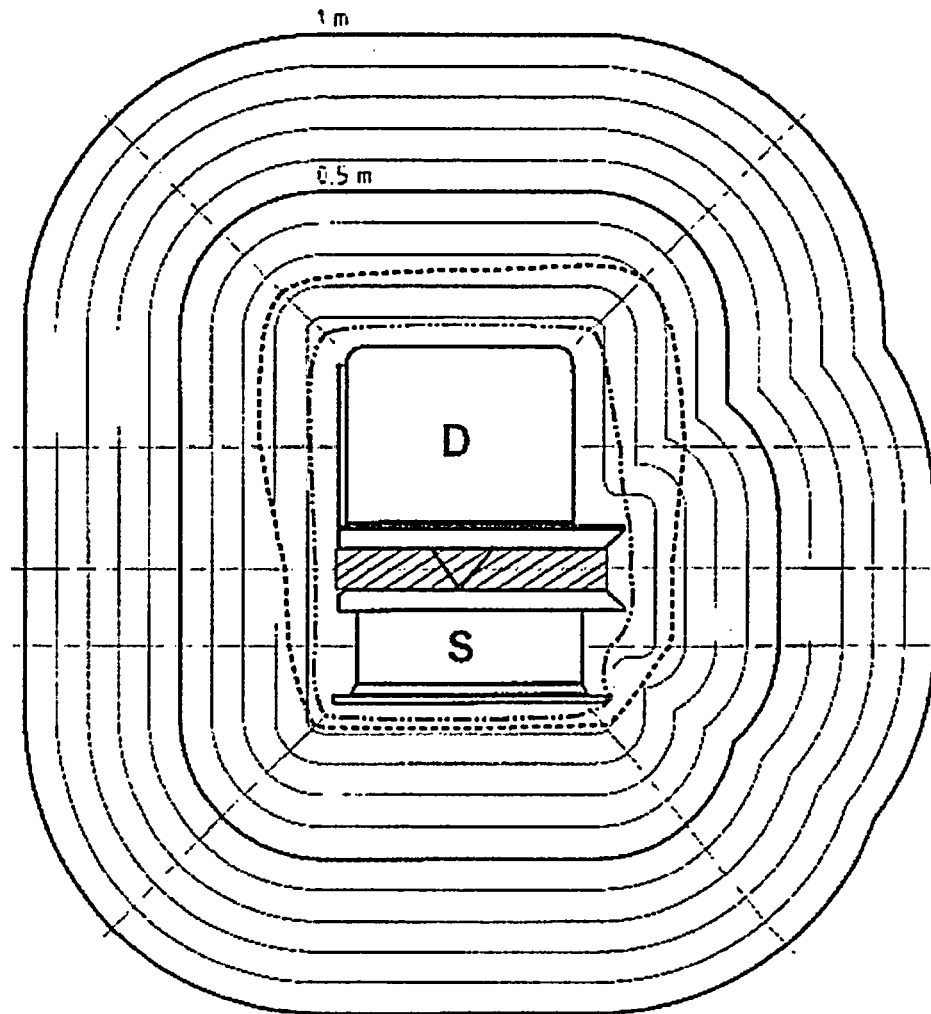
7,5 $\mu\text{Sv/h}$
 2,5 $\mu\text{Sv/h}$

Isotop: Pm147 isotope	Messspalt: 10 mm meas. gap	Strahlertyp: VZ-464 type
Aktivität: 18,5 GBq activity	Kollimator: Rund slotted collimator	Pm147-18.5-10-01 Bl. 2
Messgerät: babyline		

Isodosiskurven nach DIN 412-1 / isodose curves

Strahler im *Messbetrieb* / source *unshielded*

seitliche Ansicht
side view



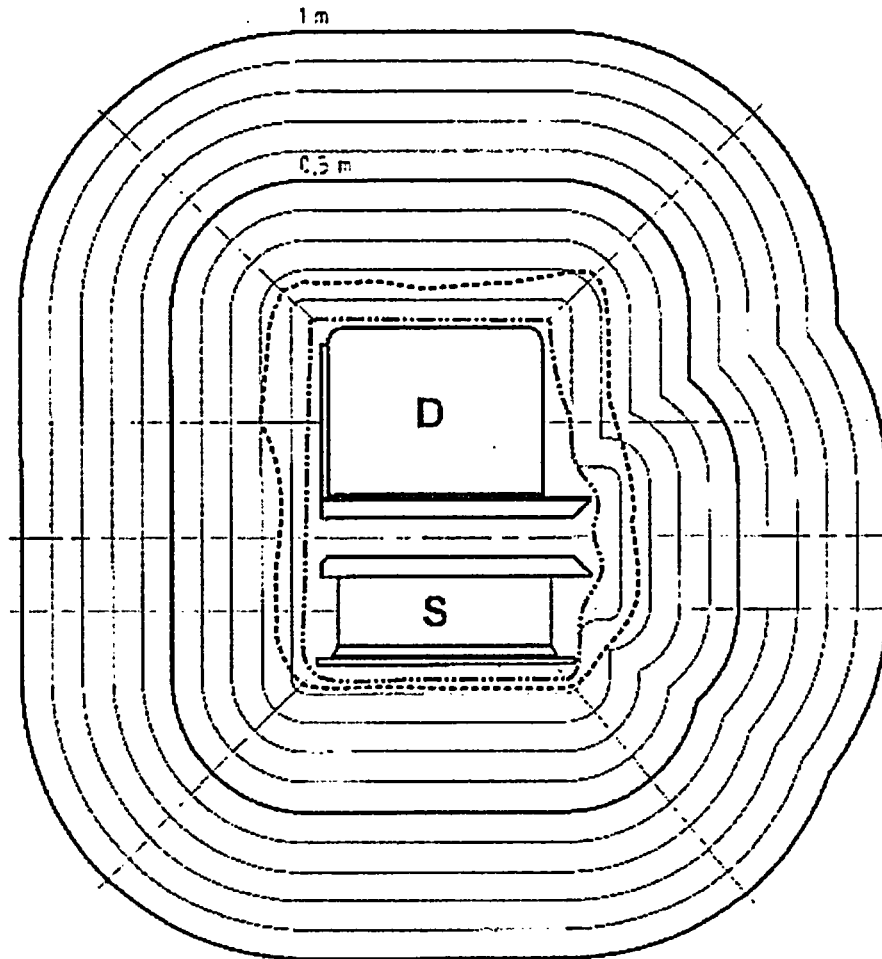
--- 7,5 µSv/h
— 2,5 µSv/h

Isotop: Sr.90 isotope	Messspalt: 35 mm meas. gap	Strahlertyp: X117 type
Aktivität: 0,37 GBq activity	Kollimator: Schlitz 10 x 35 mm slotted collimator	Sr.90-0,37-35-01 Bl. 1
Meßgerät: babyline		

Isodosiskurven nach DIN 412-1 | isodose curves

Strahler *abgeschirmt* / source *shielded*

seitliche Ansicht
side view



----- 7,5 µSv/h
 _____ 2,5 µSv/h

Isotop: Sr90 isotope	Messspalt: 35 mm meas. gap	Strahlertyp: X117 type
Aktivität: 0,37 GBq activity	Kollimator: Schlitz 10 x 35 mm slotted collimator	Sr.90-0,37-35-01 Bl. 2
Meßgerät: babyline		