Application for type approval pursuant to the German X-ray Ordinance (RöV)

Technical details for X-ray tube housing assemblies (pursuant to Annex 2 no. 1 RöV)

The personal data provided (such as name, adress, email adress) are processed by the Federal Office for Radiation Protection as part of the processing of your application. Further information, in particular regarding to your rights associated with the use of this data, is included in the Privacy Statement at www.bfs.de.

To be submitted <u>in duplicate</u> to: Bundesamt für Strahlenschutz, Bauartzulassungen, Postfach 10 01 49, 38201 Salzgitter, Germany (contact: bauartzulassung@bfs.de)

PLEASE NOTE: Details that are to be treated as a company secret or trade secret and are not meant to be reproduced in the approval document must be marked accordingly.

1. Applicant (company, address, contact details including email and/or phone number)

□ Manufacturer

Distributor

2. X-ray tube housing assembly (*X-ray tube and protective tube housing*)

2.1 Type designation / trade name

2.2 Manufacturer (company, address, if different from 1)

2.3 Purpose of use of the X-ray tube housing assembly

Employed in X-ray equipment for non-medical purposes according to

□ Annex 2 no. 1.1 RöV for the purposes of fine structure x-ray analysis, e.g. X-ray diffraction, microradiography, X-ray spectral analysis

□ Annex 2 no. 1.2 RöV as other type of X-ray tube housing assembly (up to a maximum of 500 kV)

for _____

3. Protective tube housing

3.1 Type designation / trade name

3.2 Manufacturer (company, address, if different from 2.2)

4. X-ray tube (must be indicated even if the X-ray tube housing has been designated)

4.1 Type designation / trade name

4.2 Manufacturer (company, address, if different from 2.2)

4.3 Further X-ray tube details

e.g. model, design, anode material, nature and material of exit window, angle of emergence

□ Supporting documents and copies enclosed

4.4 Designation of further X-ray tubes to be used

Manufacturer Companies, addresses, if different from 4.2	Type designation / trade name	Further details (e.g. anode material, model etc.)

5. Construction and operation of the X-ray tube housing assembly

5.1 Maximum performance data

Rated (high) voltage	max.	kV
Long-term rated current	max.	mA
Tube power	max.	kW
Approved amount of electricity per hour *)	max.	mAs/h
Pulse duration *)		S
Pulse rate *)	per hour	n
Tube current *)	max.	mA

*) Details required for X-ray flash tubes

5.2 Temporal variation of the tube current (please check where applicable)

DC voltage generator

□ Other mode of operation_

5.3 Type description

Main components of the appliance and their function with respect to the essential radiation protection features (dimensions, design, material), reference to technical guidelines (if applicable) – e.g. DIN 54113

□ Supporting documents enclosed

6. Documents required for type determination

6.1 Type drawings of the X-ray tube housing assembly and/or protective tube housing

Technical drawings conforming to standard, which provide a precise and complete overview of the design, dimensions and material of the appliance and the essential radiation protection components (e.g. shutter, screening etc.)

Drawing number	Subject	Version / date

6.2 Type drawings of the X-ray tube

Technical drawings conforming to standard, which provide details on the internal design of the X-ray tube, in particular the dimension of and the material used for the anode, the position of the focal spot, special features etc.

Subject	Version / date
	Subject

6.3 *Further application documents, existing certificates*

in addition, if available, drawings and documents in electronic form

Documentation number / data medium	Documentation name / subject	Version / date

6.4 *Operating instructions* (please check where applicable)

□ The X-ray tube housing assembly is operated independen language are enclosed indicating the essential radiation prote	ection features.
No The X-ray tube housing assembly is intended for integratio	Published as of on into X-ray appliances, remarks:
 Documents and/or copies enclosed Operating instructions in German language will be filed lat Further information: 	ter

Date

Signature and company stamp