



Guinier-Monochromator 611/615/616

The Guinier-Monochromator 611 has a mount for focusing monochromator crystals of the Johansson-Guinier type. The crystals are mounted in a U-shaped metal frame and can thus be easily inserted and exchanged.

The functional housing enables all positioning degrees of freedom that are necessary for the fine adjustment of the crystal in the beam path of the X-ray tube.

Various apertures are included for the precise limitation of the X-ray beam cross-section.

The monochromator is primarily used on the line side of fine focus X-ray tubes (0.4mm x 8mm). The $K\alpha_2$ -line of the primary radiation is suppressed completely.

Other optional distances for A and B can be quoted upon request. Please, specify Anode, A and B.

Crystals

A wide variety of different crystals for various wave lengths and diverse focal lengths is available or can be produced to customer specifications.

First, the crystal plates with the dimensions 20mm x 40mm x 0.5mm are smoothed at a predetermined angle τ to the lattice planes, and then machined and bent to a precisely calculated concave radius. The smoothing angle ensures that the primary side focus distance A, as measured from the centre of the tube to the centre of the crystal, is smaller than the secondary side focus distance B.

The series 615/616 units only differ in the B distances. Series 616 crystals are predominantly used when greater distances are required.

Parameters HUBER Guinier-Monochromator crystal 615/616:

Nr.	Anode	$K\alpha_1$ [Å]	Cryst.hkl	2θ [°]	A [mm]	B [mm]	α [°]	β [°]
615002Cu	1.54060Ge	11113.640120	220	9.558	17.723			
615004Cr	2.28962Ge	11120.517120	220	14.23626	7.98			
615006Fe	1.93597Ge	11117.238120	220	12.02422	4.53			
615008Co	1.78892Ge	11115.893120	220	11.10620	6.80			
615010Mo	0.70926Ge	22010.212120	220	7.179	13.245			
615012Ag	0.55936Ge	2208.038	120	220	5.659	10.416		

616002Cu	1.54060Ge	11113.640120	360	6.722	20.559
616004Cr	2.28962Ge	11120.517120	360	9.919	31.115
616006Fe	1.93597Ge	11117.238120	360	8.420	26.057
616008Co	1.78892Ge	11115.893120	360	7.791	23.995
616010Mo	0.70926Ge	22010.212120	360	5.065	15.359
616012Ag	0.55936Ge	2208.038 120	360	3.999	12.076

K α_1 -wave lengths according to the International Tables for
Crystallography, Vol. C, 177ff (1995)
Manufacturing tolerances +/- 3%

