Collimator for X-ray detectors.

We machine refractory metals such as tungsten, molybdenum and the tungsten heavy alloy Densimet®, to produce highprecision collimators for X-ray detectors. These absorb scattered radiation and thus help ensure an extremely high image quality.

Thanks to their high density and excellent X-ray absorption capability, our materials are better suited for this task than any other element in the periodic table. We manufacture our collimators from exceptionally flat foils in a thickness range of 20 to 200 µm.

These products excel through their outstandingly precise alignment and guarantee high resolution images:

- 1D collimators manufactured from tungsten, molybdenum and Densimet®
- 2D collimators manufactured from tungsten and molybdenum
- Molybdenum filters for mammography systems

Alongside the conventional rolling process for the foils used in the production of 1D collimators, we have developed a particularly efficient, near net shape manufacturing process. This is especially well suited for the production of very thin Densimet® foils. In contrast to tape casting techniques, our process guarantees an extremely flat surface with only very low fluctuations in thickness.

The video gives an insight into the product portfolio in the field of X-Ray technology and illustrates the process of generating radiation and subsequent collimation using a CT device.
We give our collimators their shape using electro discharge machining (EDM), punching and laser cutting processes. We have also perfected an additive, powder metallurgical process for our materials that we use for the manufacture of complex 3D components, anti-scatter grids and 2D collimators. This CAD-based manufacturing method permits the extremely precise, flexible production of advanced 3D geometries.