

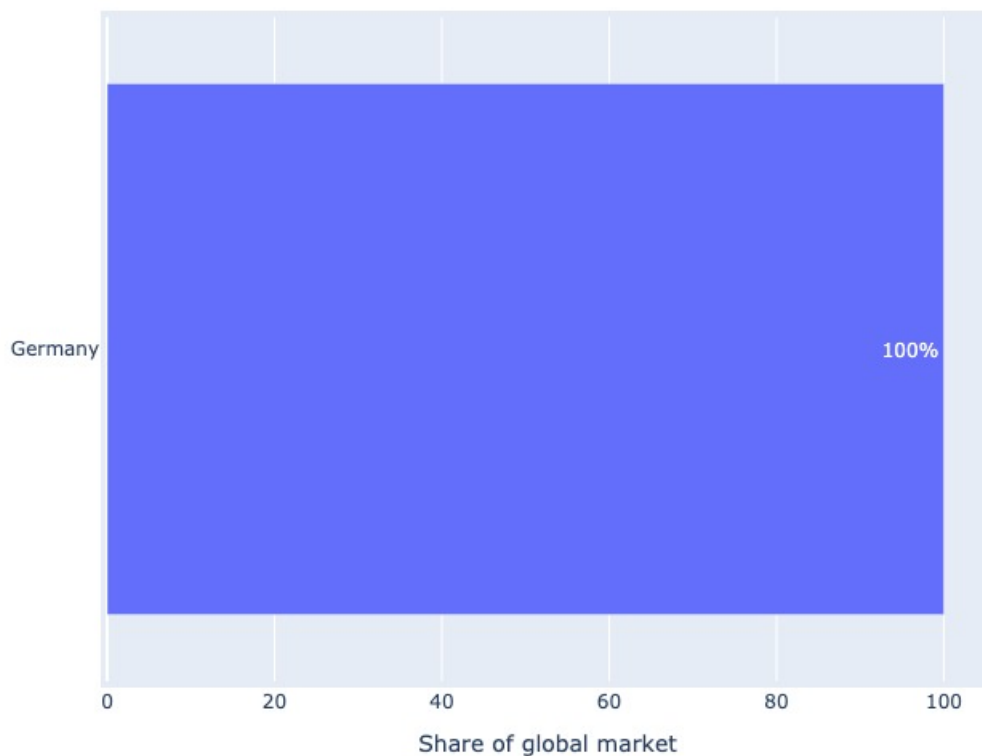
# Supply Chain Explorer: Crystal growing furnaces

This is an export from the Emerging Technology Observatory **Supply Chain Explorer** (<https://chipexplorer.eto.tech>). You can see the web version of this content at <https://chipexplorer.eto.tech/?filter-choose=input-resource&input-resource=N8>.

## Crystal growing furnaces

Crystal growing furnaces and machining tools are necessary to produce all wafers-thin, disc-shaped materials fabs used to produce chips. The furnace forms a cylindrical ingot of silicon from polycrystalline raw silicon; machining equipment then cuts the ingot into wafers used for chip fabrication. These tools have relatively low value and complexity relative to other semiconductor manufacturing equipment. Japan, Germany, and Switzerland are the main producers.

### Supplier countries



Other providers:

- China (mainland) (negligible)

### Notable supplier companies

- JSG (negligible market share) - China (mainland)
- PVA TePla - Germany