



Tungsten & Molybdenum

Products for Sapphire Growing Applications

T&D Materials manufactures and supplies premium quality tungsten and molybdenum crucibles, cylinders, and other accessories for sapphire growing applications.

- 30kg, 35kg, 55kg, 65kg, 90kg, and 120kg crucibles are available
- The purity is 99.95% min for both **tungsten crucibles and molybdenum crucibles**
- Particularly high density
- We have all necessary equipment to test the physical properties as density, hardness, surface roughness, grain size, tensile strength, etc. The possible internal injury of crucible such as porosity, slag, and cracks are strictly inspected by eddy current and ultrasound
- We supply **high density forging crucibles**. Machined from **deep forged tungsten rods**, the density is extremely close to theory value. For some extreme **large outside diameter crucibles**, we supply sintering finished crucibles. We still get good density by carefully controlling the **HIP furnace sintering temperature**.
- All our crucibles can be used for above 2000 C degree
- We can also produce **complete hot zone for sapphire crystal growth furnace; tungsten heater; molybdenum up shields, side shields; tungsten down shield, base shield; molybdenum current lead shield, current lead shield; tungsten stander, supporter and tungsten crucible pallet; molybdenum bottom; tungsten and molybdenum see holder** etc.
- Creep resistance, corrosion resistance.
- Machine finished inside and outside with good surface roughness.
- All outside, heights, wall thicknesses, base thicknesses are available.
- All other tungsten/molybdenum accessories are available.

Standard Crucible Sizes for Mono Crystal Growing Applications

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|----------------|------------|------------|
| OD 130x150 | OD 200x240 | OD 240x300 |
| OD 250x350-400 | OD 330x350 | OD 330x450 |
| OD 338x460 | OD 350x550 | |