

The following pages are a partial list of the more popular items that Midwest Tungsten Service carries in inventory for immediate delivery. This is not an exhaustive list of our inventory. If you do not see what you are looking for, please contact us. We may have the item in stock. If not, we can supply it on a made-to-order basis. We welcome requests for odd or specific sizes and shapes. We also offer custom machining of parts to print.

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We supply:

Tungsten
Molybdenum
Tantalum
Tungsten Heavy Alloy
Vacuum Evaporation Sources
Electron & Ion Beam Filaments
Chrome Plated Tungsten Rod
Crucibles and Crucible Liners
E-beam Gun Parts
Custom Machined Parts

PURE TUNGSTEN ROD

| | |
|--------------|-------------------|
| Tungsten Rod | 0.1250" x 36.00" |
| Tungsten Rod | 0.2500" x 20.00" |
| Tungsten Rod | 0.2500" x 36.00" |
| Tungsten Rod | 0.3750" x 1 meter |
| Tungsten Rod | 0.5000" x 36.00" |
| Tungsten Rod | 0.6250" x 36.00" |
| Tungsten Rod | 0.7500" x 1 meter |
| Tungsten Rod | 0.8750" x 18.00" |
| Tungsten Rod | 1.0000" x 36.00" |
| Tungsten Rod | 1.2500" x 36.00" |

MOLYBDENUM & TZM ROD

| | |
|----------------|--------------------------|
| Molybdenum Rod | 0.1250" x 6.75" |
| Molybdenum Rod | 0.1250" x 1 meter |
| Molybdenum Rod | 0.2500" x 1 meter |
| Molybdenum Rod | 0.3750" x 1 meter |
| Molybdenum Rod | 0.5000" x 36.00" |
| Molybdenum Rod | 0.5000" x 1 meter |
| Molybdenum Rod | 0.6250" x 1 meter |
| Molybdenum Rod | 0.7500" x 1 meter |
| Molybdenum Rod | 1.0000" x 12.00" |
| Molybdenum Rod | 1.0000" x 1 meter |
| TZM Mo Rods | 0.2500" x 48.00" TZM |
| TZM Mo Rods | 0.2810" x 48.00" TZM |
| TZM Mo Rods | 0.6250" x 36.00" TZM |
| Molybdenum Bar | 1.0000" x 1.00" x 12.00" |
| TZM Mo Block | 2.5000" x 3.50" x 4.50" |

MOLY THREADED ROD / NUTS / WASHERS

| | |
|-----------------|----------------------|
| Mo Threaded rod | 10-32 x 36.00" rod |
| Mo Nuts | 10-32 nuts |
| Mo Threaded rod | 1/4-20 x 36.00" rod |
| Mo Nuts | 1/4-20 nuts |
| Mo Washers | 1/4 washers |
| Mo Threaded rod | 5/16-18 x 36.00" rod |
| Mo Nuts | 5/16-18 nuts |
| Mo Washers | 5/16 washers |
| Mo Threaded rod | 3/8-16 x 36.00" rod |
| Mo Nuts | 3/8-16 nuts |
| Mo Washers | 3/8" washers |
| Mo Threaded rod | 1/2-13 x 36.00" |
| Mo Nuts | 1/2-13 nuts |

MT-17C RODS

| | |
|------------|------------------|
| MT-17C Rod | 0.1250" x 12.00" |
| MT-17C Rod | 0.1250" x 24.00" |
| MT-17C Rod | 0.2500" x 12.00" |
| MT-17C Rod | 0.2500" x 24.00" |
| MT-17C Rod | 0.3125" x 12.00" |
| MT-17C Rod | 0.3750" x 12.00" |
| MT-17C Rod | 0.3750" x 24.00" |
| MT-17C Rod | 0.4375" x 12.00" |
| MT-17C Rod | 0.5000" x 12.00" |
| MT-17C Rod | 0.5000" x 24.00" |
| MT-17C Rod | 0.5625" x 12.00" |
| MT-17C Rod | 0.6250" x 12.00" |
| MT-17C Rod | 0.6875" x 12.00" |
| MT-17C Rod | 0.7500" x 12.00" |
| MT-17C Rod | 0.8750" x 12.00" |
| MT-17C Rod | 1.0000" x 12.00" |
| MT-17C Rod | 1.1250" x 12.00" |
| MT-17C Rod | 1.2500" x 12.00" |
| MT-17C Rod | 1.3750" x 12.00" |
| MT-17C Rod | 1.5000" x 12.00" |
| MT-17C Rod | 1.7500" x 12.00" |
| MT-17C Rod | 2.0000" x 12.00" |

Midwest Tungsten Service Partial Inventory List

| | |
|------------|------------------|
| MT-17C Rod | 2.2500" x 12.00" |
| MT-17C Rod | 2.5000" x 12.00" |
| MT-17C Rod | 2.7500" x 12.00" |
| MT-17C Rod | 3.0000" x 12.00" |
| MT-17C Rod | 3.2500" x 12.00" |
| MT-17C Rod | 3.5000" x 12.00" |
| MT-17C Rod | 3.7500" x 12.00" |
| MT-17C Rod | 4.0000" x 12.00" |

| | |
|------------|------------------|
| MT-17C Rod | 0.1250" x 24.00" |
| MT-17C Rod | 0.2500" x 24.00" |
| MT-17C Rod | 0.3750" x 24.00" |
| MT-17C Rod | 0.5000" x 24.00" |

MT-17C Bars

| | |
|------------|--------------------------|
| MT-17C Bar | 1.0000" x 1.00" x 12.00" |
| MT-17C Bar | 1.0000" x 2.00" x 12.00" |
| MT-17C Bar | 3.0000" x 3.00" x 12.00" |

MT-17C PLATES

| | |
|--------------|--------------------------|
| MT-17C plate | 0.1250" x 6.00" x 12.00" |
| MT-17C plate | 0.2500" x 6.00" x 12.00" |
| MT-17C plate | 0.3750" x 6.00" x 12.00" |
| MT-17C plate | 0.5000" x 6.00" x 12.00" |
| MT-17C plate | 0.6250" x 6.00" x 12.00" |
| MT-17C plate | 0.7500" x 6.00" x 12.00" |
| MT-17C plate | 0.8750" x 6.00" x 12.00" |
| MT-17C plate | 1.0000" x 6.00" x 12.00" |
| MT-17C plate | 1.2500" x 6.00" x 12.00" |

MT-17F ROD

| | |
|------------|------------------|
| MT-17F Rod | 1.0000" x 12.00" |
|------------|------------------|

MT-17F BARS

| | |
|------------|--------------------------|
| MT-17F Bar | 0.2500" x 0.25" x 12.00" |
| MT-17F Bar | 0.5000" x 0.50" x 12.00" |
| MT-17F Bar | 0.7500" x 0.75" x 12.00" |
| MT-17F Bar | 1.0000" x 1.00" x 12.00" |
| MT-17F Bar | 1.2500" x 1.25" x 12.00" |
| MT-17F Bar | 1.5000" x 1.50" x 12.00" |
| MT-17F Bar | 1.7500" x 1.75" x 12.00" |
| MT-17F Bar | 2.0000" x 2.00" x 12.00" |
| MT-17F Bar | 2.2500" x 2.25" x 12.00" |

MT-18C ROD & BAR

| | |
|------------|------------------------|
| MT-18C Rod | 0.1250" x 12.00" |
| MT-18C Rod | 0.2500" x 12.00" |
| MT-18C Rod | 0.6250" x 12.00" |
| MT-18C Rod | 0.7500" x 12.00" |
| MT-18C Rod | 1.0000" x 12.00" |
| MY-18C Bar | 1.00" x 1.00" x 12.00" |

MT-18F ROD & BAR

| | |
|------------|--------------------------|
| MT-18F Rod | 0.5000 (12.7mm) x 25.60" |
| MT-18F Bar | 1.0000" x 1.00" x 12.00" |

MT-185 ROD

| | |
|------------|------------------|
| MT-185 Rod | 0.1250" x 12.00" |
| MT-185 Rod | 0.2500" x 12.00" |
| MT-185 Rod | 0.3750" x 12.00" |
| MT-185 Rod | 0.5000" x 12.00" |
| MT-185 Rod | 0.6250" x 12.00" |
| MT-185 Rod | 0.7500" x 12.00" |
| MT-185 Rod | 1.0000" x 12.00" |
| MT-185 Rod | 1.2500" x 12.00" |

The best choice for extreme applications...

Midwest Tungsten Service heavy metal tungsten alloys are the perfect choice where high density and machinability are important. Weights, ballast, radiation shielding, crankshaft inserts, boring bars, medical imaging, dart shafts, lead replacement are all applications where MTS heavy tungsten alloys can do the job. Check the options and properties below to determine which of our alloys is best suited to your needs. We carry many sizes in stock for immediate delivery. Other sizes and shapes can be supplied with short lead times. We can also manufacture parts from these materials to your specifications.



| MTS Alloy | MT-17C | MT-17F | MT-175 | MT-18C | MT-18F | MT-185 |
|--|---------------|-------------------|-------------------|---------------|-------------------|-------------------|
| ASTM B777; AMS-T-21014 Class | Class 1 | Class 1 | Class 2 | Class 3 | Class 3 | Class 4 |
| Material | 90% W | 90% W | 92.5% W | 95% W | 95% W | 97% W |
| | 6% Ni | 7% Ni | 5.25% Ni | 3.5% Ni | 3.5% Ni | 2.1% Ni |
| | 4% Cu | 3% Fe | 2.25% Fe | 1.5% Cu | 1.5% Fe | 0.9% Fe |
| Density, grams/cubic centimeter | 17 gm/cc | 17 gm/cc | 17.5 gm/cc | 18 gm/cc | 18 gm/cc | 18.5 gm/cc |
| Density; lbs/in ³ | 0.614 | 0.614 | 0.632 | 0.65 | 0.65 | 0.668 |
| Mil. Spec. T-21014 D | Class 1 | Class 1 | Class 2 | Class 3 | Class 3 | Class 4 |
| ASTM-B777 | Grade 1 | Grade 1 | Grade 2 | Grade 3 | Grade 3 | Grade 4 |
| Type | Type II & III | Type II & III | Type II & III | Type II & III | Type II & III | Type II & III |
| AMS 7725C | Type 1 | Type 2 | | | | |
| Hardness; Rockwell C | 24 | 25 | 26 | 27 | 27 | 28 |
| Ultimate Tensile Strength; PSI | 94,000 | 125,000 | 114,000 | 115,000 | 125,000 | 128,000 |
| Yield Strength, .2% Offset; PSI | 90,000 | 88,000 | 90,000 | 85,000 | 90,000 | 85,000 |
| Elongation, % in 1" | 8 | 14 | 12 | 7 | 12 | 10 |
| Proportional Elastic Limit; PSI | 45,000 | 52,000 | 46,000 | 45,000 | 44,000 | 45,000 |
| Modulus of Elasticity; PSI | 40 x 10 | 45 x 10 | 47 x 10 | 45 x 10 | 50 x 10 | 53 x 10 |
| Coefficient of Thermal Expansion x 10E-6/°C (20°- 400°C) | 5.4 | 4.8 | 4.6 | 4.4 | 4.6 | 4.5 |
| Thermal Conductivity; CGS Units | 0.23 | 0.18 | 0.2 | 0.33 | 0.26 | 0.3 |
| Electrical Conductivity; %IACS | 14 | 10 | 13 | 16 | 13 | 17 |
| Magnetic Properties | NIL | Slightly Magnetic | Slightly Magnetic | NIL | Slightly Magnetic | Slightly Magnetic |

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