Precision Engineered Brazing Fixtures
Material Applications
Products commonly made using MTC Wesgo/Duramic braze fixtures include x-ray components, medical components, heat treating components, fluid dispensing valves, and electrical insulators. Even demanding applications such as semiconductor processing, solar cell manufacturing, glass-to-metal sealing, and chemical vapor deposition processes utilize MTC Wesgo/Duramic braze fixtures.

High Temperature Applications
Alumina
Custom machined alumina fixtures are used to isolate and insulate metal components during high temperature brazing. Alumina has proven to be a viable option for brazing medical and laser industry components, high electrical field devices, and magnetic resonance imaging (MRI) equipment as the design and configuration of alumina fixtures are highly flexible.

Materials for Low Temperature Applications

Aluminum Silicate (M120F)
- Excellent thermal shock resistance
- Maximum operating temperature of 1150°C
- Maximum cross-section less than 3/8" thick

Silicon Carbide Converted Graphite (SCG)
- Hard, durable ceramic material
- Excellent chemical, oxidation, and wear resistance
- Superior thermal shock resistance
- Good mechanical strength
- Maximum operating temperature of 400ºC in an oxidizing atmosphere and 1800ºC in a reducing atmosphere
- No outgassing during vacuum brazing applications
- No material degradation in a wet reducing atmosphere
- Maximum operating temperature of 400°C in an oxidizing atmosphere and 1800°C in a reducing atmosphere
- Less particle generation when compared to graphite
- Cleaner to handle than graphite
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- Hard, durable ceramic material
- Excellent chemical, oxidation, and wear resistance
- Superior thermal shock resistance
- Good mechanical strength
- Maximum operating temperature of 1150°C
- Maximum cross-section less than 3/8" thick
- Good resistance to acids, salts, and most molten metals
- Cleaner to handle than graphite
- Maximum operating temperature of 400ºC in an oxidizing atmosphere and 1800ºC in a reducing atmosphere
- Less particle generation when compared to graphite

Materials for Low Temperature Applications

Aluminum Silicate (M120F)

Excellent thermal shock resistance makes M120F ideal for applications requiring fast thermal cycling. Fortunately, M120F’s ease of machinability makes it a cost effective solution for intricate shapes and tight dimensional tolerance requirements. M120F is utilized in glass sealing, semiconductor chip brazing, and soldering operations.
MTC Wesgo/Duramic’s engineering staff combines world class expertise and manufacturing capabilities to offer competitive custom solutions for even the most complex applications. Our engineering staff offers customers a strong understanding of geometric dimensioning and tolerancing (GDT) as well as specific application requirements. Whether your application is for medical implants, vacuum power tubes, or delicate x-ray devices, we provide our customers with the best engineered devices on the market.

**Engineering Support**

- Intricate fixture designs
- Ability to hold tight tolerances
- Variety of material options for low temperature and high temperature applications
- Prototyping service available
- Fully-integrated ceramic manufacturing capabilities
- Application engineering resources
- Custom manufacturing
- Rapid turnaround

**MTC Wesgo/Duramic offers the following advantages**

MTC Wesgo/Duramic is an ISO 9001:2008 certified facility

To speak to one of our engineers, contact us today.

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