WHAT IS ZANITE PLUS?

Zanite® Plus polymer composite is a blend of pure silicon dioxide ceramic (99.8%) quart aggregate, specially formulated high-strength epoxy resin and proprietary additives. The natural elliptical shape of quartz is ideal for casting intricate structures. Often this material is referred to as polymer concrete or mineral casting.

Zanite® Plus replaces traditional materials such as iron, aluminum, and steel used in the manufacture of many structural components. Castings are manufactured to finish tolerances that minimize the need for secondary finishing operations. Our polymer composite is acquired by design engineers throughout the world as an alternative material due to its excellent design flexibility, mechanical properties, and short production time.

The epoxy-based mineral casting or polymer concrete castings used for machine bases originated in Europe in the mid 1970’s. The epoxy based material, cast to finish tolerances with many of the advantages of traditional materials such as iron, aluminum and steel typically require secondary machining or painting operations.

CAST TO FINISH TOLERANCES Zanite® Plus precisely replicates finished drawings to enable the need for many secondary machining operations. Cost effective alternative to traditional materials such as iron, aluminum and steel which typically require secondary machining or painting operations.

VIBRATION DAMPING Tests prove our polymer composite provides over 200 times the damping of an equal quality of steel. In addition, Zanite® Plus can be cast in many complex solid geometries resulting in significant damping over a conventional hollow cast frame or welded assembly. Vibration reduction leads to improved system performance and less distortion. Zanite® Plus also reduces sound.

DESIGN FLEXIBILITY It is easy to integrate conduit piping, custom linear rails, cutting fluid trays, hydraulic fluid tanks and threaded inserts. Wall thickness can vary and multiple custom linear rails, cutting fluid trays, hydraulic fluid tanks and threaded inserts. Wall thickness can vary and multiple
castings are manufactured by our division located in Chardon, OH. In early 2015 we re-branded our material Zanite® Plus.

Beginning in 2013 BaseTek began a program to study and develop our own in-house material Zanite® Plus. Through documented testing we can certify Zanite® Plus meets or exceeds the original inherited Zanite formulation in every category. BaseTek utilizes a combination of internal resources along with outside testing labs to verify the material properties. Specific properties are listed below.

FLAME SPREAD INDEX

CHEMICAL RESISTANCE

THERMAL EXPANSION

TENSILE STRENGTH

MODULUS OF ELASTICITY

DENSITY

COMPRESSIVE STRENGTH

PROPERTIES

Our polymer bases can be cast and shipped within days of receiving an order. They are delivered ready to assemble and equip equipment. Short lead times reduce planning inventory and help speed your product to market. Tooling provides a fast proof of concept for rapid prototyping and new product development.

CORROSION RESISTANT Zanite Plus offers enhanced chemical and corrosion resistance to most common acids, alkalis, solvents, oils, and cutting fluids. Zanite Plus eliminates the need for painting or expensive protective coatings.

ENVIRONMENTALLY FRIENDLY Castings are produced using a cold casting process requiring a minimal amount of energy consumption. Old castings are landfill friendly and require no cleaning.

RELIABLE LONGEVITY Zanite Plus castings are designed in conjunction with the life of the machine, if not longer. Improved thermal stability, high compressive strength, and minimal moisture absorption make Zanite Plus an excellent option.

In-house material blending and controlled batch mixing allows for faster delivery and reduced inventory. Quick deliveries reduce inventory.

It is easy to integrate conduit piping, cutting fluid trays, hydraulic fluid tanks and threaded inserts. Wall thickness can vary and multiple custom linear rails, cutting fluid trays, hydraulic fluid tanks and threaded inserts. Wall thickness can vary and multiple
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In-house material blending and controlled batch mixing allows for faster delivery and reduced inventory. Quick deliveries reduce inventory.

WHAT ARE THE PROPERTIES OF ZANITE?

Zanite® Plus polymer composite is a blend of pure silicon dioxide ceramic (99.8%) quart aggregate, specially formulated high-strength epoxy resin and proprietary additives. The natural elliptical shape of quartz is ideal for casting intricate structures. The technology migrated to the USA in the early 1960’s with machine tool builders. In 2000, BaseTek, LLC purchased the technology and is now a major supplier to the major tool builders. Zanite® plus castings are manufactured by our division located in Chardon, OH. In early 2015 we re-branded our material Zanite® Plus. Through documented testing we can certify Zanite® Plus meets or exceeds the original inherited Zanite formulation in every category. BaseTek utilizes our own in-house testing equipment along with outside testing labs to verify the material properties.

Specific properties are listed below:

- **Fast Delivery**: Our polymer bases can be cast and shipped within days of receiving an order. They are delivered ready to assemble and equip equipment. Short lead times reduce planning inventory and help speed your product to market.
- **Tooling Provides a Fast Proof of Concept**: Tooling provides a fast proof of concept for rapid prototyping and new product development.
- **Corrosion Resistant**: Zanite Plus offers enhanced chemical and corrosion resistance to most common acids, alkalis, solvents, oils, and cutting fluids. Zanite Plus eliminates the need for painting or expensive protective coatings.
- **Environmentally Friendly**: Castings are produced using a cold casting process requiring a minimal amount of energy consumption. Old castings are landfill friendly and require no cleaning.
- **Reliable Longevity**: Zanite Plus castings are designed in conjunction with the life of the machine, if not longer. Improved thermal stability, high compressive strength, and minimal moisture absorption make Zanite Plus an excellent option.

2015 Bestech, LLC. Zanite Plus has been adopted by the Illinois Tool Works (ITW) Pre-cast division located in Chardon, OH.
ABOUT THE COMPANY
BaseTek, LLC. Founded in 2001, specializes in the design and built of polymer composite bases and filled weldments for a broad range of industries. We are the market leader in polymer concrete baseplates for industry.

BaseTek offers a complete line of pre-engineered and custom fabricated, along with accessories for all types of processes pumps and specialty rotating equipment.

BaseTek’s company owned facility custom built in 2012 is specifically for the manufacture of polymer castings. We are staffed with industry experts offering over the most combined years of polymer casting experience in the USA today. Basalclival vertical integration allows for efficient designing, manufacturing, and inspection of castings to match any size and shape mass production demands. Computer controlled batch mixing systems, precision tooling and CMM inspection equipment ensure consistent quality and reliable castings.

MATERIAL TESTING
- 26,000+ square foot manufacturing facility
- CNC inspection and paint capabilities
- Material traceability with manufacturing routers
- In house material verification capability

STANDARD AND CUSTOM DESIGNED INSERTS:
- Cool-in custom designed threaded locators for mounting equipment.
- Pout-thru cooling lines cast in place to provide coolant, lubrication, air & wire ways.
- Steel plates can be used to create long and extremely flat mounting surfaces.
- Internal bed wash, wire vay, and fork tubes.

Bases are manufactured of Zanite®. A proprietary polymer concrete material also referred to as a mineral casting. Parts are cast to finished tolerances while offering mechanical properties that in many applications replace traditional materials such as iron, aluminum, and steel. Zanite®Plus is in corrosion resistance, environmentally friendly, and offers short production times.

BaseTek incorporates the latest casting technologies and can aid in the development of tooling and part design through modern CAD/CAM capabilities including Solid Modeling and sophisticated Finite Element Analysis Software.

BaseTek’s goal is to consistently supply its customers with the highest quality part at the lowest possible cost.

MACHINE TOOL APPLICATIONS:
Typical applications include: high speed machining cells, turning centers, CNC knee mills, rolling machines, waterjet cutting machines, laser cutting machines, grinders and industrial measurement & testing equipment.

7,000 lb. base for Automation
4,500 lb. base for Precision
CNC knee mill

2,500 lb. base for hydraulic engine testing base.

1,200 lb. base for a micro grinder.

10ft. base for a precision gauging machine.

ZANITE® PLUS POLYMER COMPOSITE FILLED WELDMENTS AND RUN CASTINGS:
- Excellent for low volume and custom applications.
- Offers the benefit of polymer for vibration damping without the cost of a mold.
- Quick turnaround and low cost compared to cast iron, cast aluminum.
- We offer in-house service or can provide composite for field applications.

WE HAVE FILLED WELDMENTS WITH A FEW HUNDRED POUNDS OF POLYMER TO WELDMENTS REQUIRING SEVERAL THOUSAND POUNDS:
- Basetek offers proper weldment preparation and quick turnaround for your application.
- Delivery can be a few days with proper notice and account setup.

METROLOGY AND PHARMACEUTICAL APPLICATIONS:
Typical applications include: CMMs, surface, form, roundness and contour testing instruments. As well as nanometer-scale measuring and testing platforms for life sciences, pharmaceutical, and engineering applications.

BaseTek offers proper weldment preparation and quick turnaround for your application.
- Delivery can be a few days with proper notice and account setup.

SEMICONDUCTOR APPLICATIONS:
Typical applications include: semiconductor screen printing machines, wire and die bonding, wafer inspection and testing, photoplotter, laser PCB drilling machines, pick and place machines, surface mounters, wafer handling stations, by.Uri equipment, chip-clip, and dispensing equipment.

400 lb. base for a precision non-contact water profiler.

MOLDS AND TOOLS:
- Molds can be built from wood, fiberglass, aluminum, steel, or any combination depending on the application & design.

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Zanite® Plus polymer composite is a blend of pure silicone dioxide ceramic (99.8%) quartz aggregate, specially formulated high-strength epoxy resin and proprietary additives. The natural elliptical shape of quartz is ideal for casting intricate structures. Often this material is referred to as polymer concrete or mineral casting.

Zanite® Plus replaces traditional materials such as iron, aluminum, and steel used in the manufacture of many structural components. Castings are manufactured to finish tolerances that minimize the need for secondary finishing operations. Our polymer composite is accepted by design engineers throughout the world as an alternative material to conventional hollow cast frames or welded assemblies. Vibration damping, mechanical properties, and short production time. The epoxy-based casting material used for machine bases originated in Europe in the mid-1970’s.

**ADVANTAGES OF ZANITE® PLUS**

- **CAST TO FINISH TOLERANCES** Zanite® Plus precisely replicates tolerances intended for the need for many secondary machining operations. Cast-off allows alternative material such as iron, aluminum and steel which typically require secondary machining or grinding operations.

- **VIBRATION DAMPING** Tests prove our polymer composite provides 20 to 200 times the damping of an equal geometry of steel. In addition, Zanite® Plus can be cast into many complex solid geometries resulting in significant damping over a conventional hollow cast frame or welded assembly. Vibration reduction leads to improved system performance and life. Zanite® Plus also reduces sound.

- **DESIGN FLEXIBILITY** It’s easy to integrate conduit piping, custom linear rails, cutting fluid, hydraulic fluid tanks and associated fittings. Wall thickness can vary and multiple components can be combined into a single casting. The process easily allows plastics and metals to merge in the same casting.

- **COST EFFECTIVE** Most post-casting operations such as machining, heat treating, stress relieving and even painting can be eliminated. Quick deliveries reduce inventory. In-house material handling and controlled casting minimize rejections for precise, consistent quality from casting to casting.

**WHAT ARE THE PROPERTIES OF ZANITE?**

Zanite® Plus polymer composite is a blend of pure silicone dioxide ceramic (99.8%) quartz aggregate, specially formulated high-strength epoxy resin and proprietary additives. The natural elliptical shape of quartz is ideal for casting intricate structures.

- **Rotating Equipment Baseplates** Keeping rotating equipment level is essential. BaseTek Zanite® Plus Polymer Concrete Baseplates outperform steel baseplates in every way. The difference is Zanite® Plus.

Using PoxyBase with Zanite® Plus guarantees you unmatched surface flatness compared to Conventional Steel designs and EpoxyCoated Cast Iron Concrete materials. Zanite® Plus provides significant vibration damping, greater thermal stability, more resistance to twisting and displacing and superior corrosion resistance. It is easier and less costly to install, plus requires no maintenance.

**CUSTOM POLYMER CASTINGS**

- **Leveling Inserts**— save time on critical shaft alignment.
- **SERTS**— designed for all motor applications. Can be omitted.
- **INTEGRATED DRIP PAN**— will not rust or corrode within years of baseplate. Standard on all bases.
- **LEVELING INSERTS**— save time on critical shaft alignment.
- **STAINLESS THREADED SERTS**— save time on critical shaft alignment.
- **MADE FROM**— provides unmatched corrosion resistance.
- **MADE FROM**— will not rust or corrode with compatible fluids.
- **CUSTOM CONFIGURATIONS MADE EASY**

**CUSTOM POLYMER CASTINGS**

- **LEVELING INSERTS**
- **STAINLESS THREADED SERTS**
- **INTEGRATED DRIP PAN**
- **MADE FROM**

**WHAT IS ZANITE® PLUS?**

- **FLAME SPREAD INDEX**
- **WATER ABSORPTION**
- **DENSITY**
- **COMPRESSIVE STRENGTH**
- **DAMPING RATIO**

- **CUSTOM OVERHAUL BASEPLATES**

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- **CUSTOM OVERHAUL BASEPLATES**

BaseTek, LLC 14975 White Road, Middlefield OH 44062 USA www.basetek.com 877.712.BASE (2273) E-mail: info@basetek.com www.basetek.com 877.712.BASE (2273)
ABOUT THE COMPANY
BaseTek, LLC. Based in 2001, specialists in the design and built of polymer composite bases and filled weldments for a broad range of industries. We are the market leader in polymer concrete baseplates for machine tool applications - our equipment industry.

BaseTek offers a complete line of pre-engineered and custom lathe bases, along with accessories for all types of pumps and specifically rotating equipment.

BaseTek’s company owned facility custom built in 2012 is specifically for the manufacture of polymer castings. We are staffed with industry experts offering over 80 combined years of industry experience. BaseTek’s goal is to assist in the development of tooling and part design through modern CAD capability, including Solid Modeling and advanced finite element analysis software.

BaseTek’s custom designed threaded inserts allow for easy and efficient design and installation. In-house service, or can provide quick turnaround and delivery can be a few days with proper notice and account setup.

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MACHINE TOOL APPLICATIONS:
Typical applications include: high speed machining cells, turning centers, CNC knee mills, rolling machines, waterjet cutting machines, laser cutting machines, grinders and industrial measurement & testing equipment.

ZANITE® POLYMER COMPOSITE FILLED WELDMENTS AND IRON CASTINGS:
Zanite® Plus. A proprietary polymer composite material specifically formulated as a mineral casting. Parts cast to finished tolerances while offering mechanical properties that in many applications replace traditional materials such as iron, aluminum, and steel.

Zanite® Plus is corrosion resistant, environmentally friendly, and offers short production times.

BaseTek incorporates the latest casting technologies and can aid in the development of tooling and part design through modern CAD capability, including Solid Modeling and advanced finite element analysis software.

BaseTek’s goal is to successfully supply its customers with the highest quality part at the lowest possible cost.

ZANITE® PLUS POLYMER COMPOSITE Filled Weldments and Iron Castings:

- Excellent for low volumes and custom applications.
- Offers the benefit of polymer for vibration damping without the cost of a metal.
- Quick turnaround and low cost compared to iron, cast aluminum.

We offer in-house service or can provide composite for field applications.

WE HAVE FILLED WELDMENTS WITH A FEW HUNDRED POUNDS OF POLYMER TO WELDMENTS REQUIRING SEVERAL THOUSAND POUNDS:
BaseTek offers proper weldment preparation and quick turnaround for your application.

Delivery can be a few days with proper notice and account setup.

Large weldments filled with Zanite Plus polymer composite. Dampen both noise and vibration.

METROLOGY AND PHARMACEUTICAL APPLICATIONS:
Typical applications include: CMMs, surface, form, roundness and contour testing instruments. As well as nanometer-scale manufacturing and testing platforms for life sciences, pharmaceutical, and engineering applications.

SEMICONDUCTOR APPLICATIONS:
Typical applications include: Pick-and-place machines, automated assembly machines, CNC, and die bonding. We offer performance, non-contact water profiler.

Zanite® Plus Housekeeping Planter electrical enclosure.

MACHINES APPLICATIONS:
1,900 lb. base for automotive NVH test equipment.

4,300 lb. base for Precision Cutting Tool Grinder

Zanite® Plus Housekeeping Planter electrical enclosure.

SEVERAL THOUSAND POUNDS:
POUNDS OF POLYMER TO WELDMENTS REQUIRING

Zanite® Housekeeping Planter electrical enclosure.

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MOLDS AND TOOLS:

- Molds can be made from wood, fiberglass, aluminum, steel, or any combination depending on the application & design.

- Zanite® Plus offers thermostable design flexibility, and virtually zero moisture absorption rate help OEM’s achieve their goals.

- Demands for metrology equipment to perform in multiple environments allow design engineers to take advantage of Zanite® Plus' many features. Inspection equipment must be able handle a temperature controlled lab as well as the harsh environment of a typical shop floor.

Typical applications include: screen printing machines, pick and place machines, surface profilers, dicing machines, flip-chip, wire and die bonding, wafer inspection and testing, automated capacitor winding machine.

SEMICONDUCTOR APPLICATIONS:
Typical applications include: Pick-and-place machines, automated assembly machines, CNC, and die bonding. We offer performance, non-contact water profiler.

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Typical applications include: CMMs, surface, form, roundness and contour testing instruments. As well as nanometer-scale manufacturing and testing platforms for life sciences, pharmaceutical, and engineering applications.

- Zanite® Plus is corrosion resistant, environmentally friendly, and offers short production times.

BaseTek incorporates the latest casting technologies and can aid in the development of tooling and part design through modern CAD capability, including Solid Modeling and advanced finite element analysis software.

BaseTek’s goal is to successfully supply its customers with the highest quality part at the lowest possible cost.

- Excellent for low volumes and custom applications.
- Offers the benefit of polymer for vibration damping without the cost of a metal.
- Quick turnaround and low cost compared to iron, cast aluminum.

We offer in-house service or can provide composite for field applications.

Large weldments filled with Zanite Plus polymer composite. Dampen both noise and vibration.

- Zanite® Plus housekeeping planter electrical enclosure.

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Large weldments filled with Zanite Plus polymer composite. Dampen both noise and vibration.
ABOUT THE COMPANY

BaseTek, LLC, founded in 2001, specializes in the design and built of proven polymer composite bases and filled weldments for a broad range of industries. We are the market leader in polymer concrete baseplates for the machine tool industry. BaseTek offers a complete line of pre-engineered and custom baseplates, along with accessories for all types of pumps and specialty rotating equipment.

BaseTek’s company owned facility custom built in 2012 is specifically for the manufacture of polymer casings. We are staffed with industry experts offering over 20 combined years of polymer casting experience in the USA today. Balanced vertical integration allows for efficient designing, manufacturing, and inspection of castings to match any size and shape most applications demand. Computer controlled batch mixing systems, precision tooling and CMM inspection equipment ensure consistent quality and reliable castings.

MATERIAL TESTING
• 26,000+ square foot manufacturing facility
• ISO 9001:2015 certified
• ANSI/ASME quality assurance
• Material traceability with manufacturing routers
• In-house material verification capability
• In-house material testing capability
• AASHTO M274
• Incompressible modulus of elasticity
• Poisson’s ratio
• Static modulus of rupture and toughness

STANDARD AND CUSTOM DESIGNED INSERTS:
• Custom designed threaded inserts for mounting equipment.
• Internal threading: 1-8, 1-10, 1-11, 1-12, M10, M12, M16, M20
• Acorn head: 3/8-16, 1/2-13, 3/4-10, 1-1/4-8, 1-1/2-8, 2-5/8-8
• Polythreading lines cast in place to provide secure flat mounting surfaces.
• Internal ball seat, wire wrap, and fork tube.

MACHINE TOOL APPLICATIONS:
Typical applications include high speed machining, boring, turning centers, CNC knee mills, rolling machines, waterjet cutting machines, laser cutting machines, grinders and industrial measurement & testing equipment.

ZANITE® Plus polymer composite filled weldments and iron castings:
• Excellent for low volume and custom applications.
• Allows the benefit of polymer for vibration dampening without the cost of a cast iron.
• Quick turnaround and low cost compared to iron cast, aluminum.
• We offer in-house service or can provide composite for field applications.

WE HAVE FILLED WELDMENTS WITH A FEW HUNDRED POUNDS OF POLYMER TO WELDMENTS REQUIRING SEVERAL THOUSAND POUNDS:
• BaseTek offers proper weldment preparation and quick turnaround for your application.
• Delivery can be a few days with proper notice and account setup.

SEMICONDUCTOR APPLICATIONS:
Typical applications include: screen printing machines, wire and die bonding, wafer inspection and testing, photolithography, laser PCB drilling machines, pick and place machines, surface mounters, water handling systems, docks, chip, and dispensing equipment.

METROLOGY AND PHARMACEUTICAL APPLICATIONS:
Typical applications include: CMMs, surface, form, roundness and contour testing instruments. As well as nanometer-scale measuring and testing platforms for life sciences, pharmaceutical, and engineering applications.

MACHINES & TOOLS:
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Zanite Plus polymer composite is a blend of pure silicon dioxide ceramic (95%) quartz aggregate, specially formulated high-strength epoxy resin and proprietary additives. The natural elliptical shape of quartz is ideal for casting intricate structures. Often this material is referred to as polymer concrete or mineral casting.

Zanite Plus replaces traditional materials such as iron, aluminum, and steel in the manufacture of many structural components. Castings are manufactured to finish tolerances that minimize the need for secondary finishing operations. Our polymer concrete is acquired by design engineers throughout the world as an alternative material due to its excellent design flexibility, mechanical properties, and start production time.

BaseTek utilizes the epoxy-based mineral casting or polymer concrete castings used for machine bases originated in Europe in the mid 1970's. The epoxy based material of mineral casting is an alternative material due to its excellent design flexibility, mechanical properties, and start production time. The technology migrated to the USA in the early 1980's with machine tool builders. In 2000, BaseTek LLC purchased the technology and now assigns the legal marketing rights to the trade name Zanite. From there, Zanite is offered in the USA through BaseTek, LLC. The Zanite Plus division is located in Chelmsford, OH.

Advances in 2011 were advanced our natural Zanite. Through documented testing we can certify Zanite Plus meets or exceeds the original mineral Zanite formulation in every category. BaseTek utilizes our own in-house testing equipment along with outside testing labs to verify the material properties. Specific properties are listed below.

ADVANTAGES OF ZANITE® PLUS

- CAST TO FINISH TOLERANCES: Zanite Plus precisely replicates tooling eliminating the need for secondary machining operations. Cost effective alternative to traditional materials such as iron, aluminum, and steel which typically require secondary machining or grinding operations.
- VIBRATION DAMPING: Tests prove our polymer composite provides over 20x the damping of an equal geometry of steel. In addition, Zanite Plus can be cast in many complex solid geometries resulting in significant damping over a conventional hollow cast frame or welded assembly. Vibration reduction leads to improved system performance and tool life.
- DESIGN FLEXIBILITY: It is easy to integrate conduit piping, custom linear rails, cutting fluid trays, hydraulic fluid tanks and threaded inserts. Wall thickness can vary and multiphase components can be combined into a single casting. The process easily allows plastics and metals to merge in the same casting.
- COST EFFECTIVE: Most post-casting operations such as machining, heat treating, stress relieving and even painting can be eliminated. Back fillers reduce inventory. In-house material blending and controlled back filling allows for precise, consistent quality from casting to casting.
- FAST DELIVERY: Our polymer bases can be cast and shipped within days of receiving an order. Bases are delivered ready to assemble final equipment. Short lead times reduce planning inventory and help speed your product to market. Testing provides a fact lead of concept for rapid prototyping and new product development.
- CORROSION RESISTANCE: Zanite® Plus offers enhanced chemical and corrosion resistance to most common acids, alkalis, salts, and other chemically aggressive environments. Zanite Plus exceeds the need for painting or expensive protective coatings.
- ENVIRONMENTALLY FRIENDLY: Castings are acquired by a cold casting process requiring a minimal amount of energy consumption. Old castings are landfill friendly and require no maintenance.
- RELIABLE LONGLIFE: Zanite® Plus polymer castings are designed in conjunction with the life of the machine, if not longer. Improved thermal stability, high compressive strength, and minimal moisture absorption make Zanite® Plus an excellent option.
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Zanite Plus polymer castings, ideal for today’s modern machine designs...