



PLUNGER

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Plungers are critical components in high-pressure pumping systems used for metering, dosing, and slurry handling. In industries where abrasive or corrosive fluids are pumped continuously, conventional steel plungers often fail due to wear, galling, and chemical attack.

CeramForge provides a durable and high-precision alternative: ceramic plungers. Manufactured from advanced technical ceramics, these plungers exhibit excellent wear resistance, chemical inertness, and dimensional stability under pressure and temperature fluctuations.

MATERIAL DIVERSITY

Zirconia (Y-TZP / MgO-PSZ) | Zirconia Toughened Alumina (ZTA) | Alumina (Al_2O_3)

These materials undergo isostatic pressing and precision grinding to achieve exacting tolerances and mirror finishes, critical for sealing applications.

INDUSTRIES SERVED

- Oil & Gas (chemical injection pumps)
- Water Treatment and Desalination
- Mining and Slurry Dosing
- Pharmaceutical and Biotech
- Paints, Inks, and Coatings
- High-Pressure Cleaning Equipment

APPLICATION

- Metering and dosing pumps
- Reciprocating plunger pumps
- Slurry injection systems
- Chemical dosing skids
- High-pressure seal assemblies

KEY ADVANTAGES

- Long Service Life: Maintains surface integrity under millions of pressure cycles.
- Excellent Chemical Resistance: Unaffected by acids, alkalis, and solvents.
- Low Friction Coefficient: Smooth surface finish reduces wear on seals and gaskets.
- Dimensional Precision: Enables tight seals and consistent volumetric accuracy.
- No Corrosion or Pitting: Even in aggressive environments where metals fail.

CONCLUSION

Ceramic plungers from CeramForge are the go-to solution for high-precision and high-pressure applications where metallic plungers fail. Designed to outperform in both corrosive and abrasive environments, our plungers help reduce downtime, improve accuracy, and extend the operating life of critical pumping systems.

Choose CeramForge ceramics for dependability where it matters most.