

What to do if the ceramic pump core cannot be installed



Overview

NEOCERAM Technical Support – NeoceramOur engineers can guide you in resolving the vast majority of issues related to rotary piston pumps directly on site.

Key Takeaways

If a ceramic pump core cannot be installed, first check for alignment, cleanliness, and damage, and seek manufacturer guidance if issues persist. Check for Alignment and Fit

Ceramic plungers are designed for precise axial movement and cannot tolerate bending or side loading. Misalignment between the plunger, crosshead, packing box, and fluid end can prevent installation and cause damage during operation. Ensure the pump components are correctly aligned and that the plunger is inserted straight without forcing it into the bore .

Inspect for Damage or Contamination

Ceramic cores are brittle and can crack, chip, or lose surface finish if exposed to abrasive particles, thermal shock, or rough handling. Before installation, inspect the plunger for visible cracks, chips, or scoring. Also, ensure the bore and packing area are clean and free of debris, lime deposits, or other contaminants that could obstruct insertion .

Lubrication and Packing

Apply a thin coat of appropriate lubricant, such as silicone grease or mineral oil, to seals, O-rings, and the plunger surface to facilitate smooth installation. Avoid over-tightening packing, as excessive friction can damage the ceramic surface, while loose packing may allow abrasive particles to enter and cause wear .

Temperature Considerations

Avoid thermal shock by ensuring the plunger and pump components are at compatible temperatures. Sudden exposure of a hot plunger to cold liquid or vice versa can create internal stress and prevent proper installation .

Manufacturer Support

If the ceramic core still cannot be installed, contact the pump manufacturer or technical support team. They can provide guidance on correct handling, storage, and installation procedures, and may advise on replacement or repair if the plunger is defective . Attempting to force the plunger can lead to irreparable damage and compromise pump performance.

Summary

- Verify alignment and straight insertion.
- Inspect the plunger and bore for damage or debris.
- Lubricate seals and packing lightly.
- Avoid thermal shock during installation.
- Seek manufacturer guidance if problems persist. Following these steps ensures safe installation, prevents damage to the ceramic core, and maintains pump performance and longevity .

Article Content

The 4 pin connector from the pump (refer to diagram 11 on the cooler's installation instructions) is supposed to be

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

