

# Data Sheet

## Model: Sand Seal Retort



### INTRODUCTION

A sand seal retort is utilized in heat treatment processes that require a controlled inert or reactive atmosphere. It is commonly used to prevent oxidation and to improve surface hardness during processing.

In this setup, the sand seal serves as the sealing method, where a layer of sand is placed between the lid and the base of the retort. This configuration helps minimize gas leakage, but it does not form a completely airtight seal. Consequently, a small amount of air (oxygen) may still enter the chamber, making it unsuitable for achieving very low oxygen levels, though it is adequate for general heat treatment applications.

Sand seal retorts are generally manufactured from Inconel, with a maximum operating temperature of up to 1100 °C, or from stainless steel (SS grade), which can operate up to 1050 °C.



Sand Seal Retort



Arrangement of a Sand Seal Retort in a Furnace

### SPECIFICATIONS

**Maximum Temperature (Inconel):** 1100 °C

**Maximum Continuous Temperature (SS):** 1050 °C

- | Shallow removable lid locates into a sand seal on top of a deep base
- | Front mounted gas inlet/outlet connections extend through slots in the furnace door
- | Suitable for various applications
- | Furnace and retort must be ordered together; furnace is modified for use with or without the retort
- | Sand seal suitable for general inert or reactive atmosphere applications
- | Available in Inconel or SS grade stainless steel
- | Type 'N' thermocouple compatible

**| Material Options:** Inconel or SS Grade Stainless Steel

**| Max. Temp. (Inconel):** 1100 °C

**| Max. Temp. (SS):** 1050 °C

**| Seal Type:** Sand Seal

**| Gas Connections:** Front mounted inlet / outlet

### OPTIONS

- | Retorts are available in multiple sizes upon request.

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