

# Accelerating Rate Calorimeter 254 (ARC®)

## Accelerating Rate Calorimetry

- More reliable data and a wider range of application due to the fastest tracking rate up to 200 K/min
- Patented *VariPhi*® technology can realize low phi test even with a small and safe sample size. Effective detection of both exothermic and endothermic transitions can be achieved by the versatile operating modes on ARC® 254
- Controlled by the same powerful *Proteus*® software which user can use to operate all other NETZSCH thermal analysis instruments in the lab.

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The Accelerating Rate Calorimeter 254 (ARC® 254) provides adiabatic calorimetry data in a safe, controlled laboratory environment. This information helps provide a sound understanding of the fundamental physical processes involved. From this understanding, various safe operating systems and procedures can be developed to mitigate the hazards posed by a reactive system.

The advanced ARC® 254 helps engineers and scientists identify potential hazards and tackle key elements of process optimization and thermal stability. As a highly versatile, miniature chemical reactor, sample can be stirred, material injected, and it can be used for vent studies. The ARC® 254 has been designed to use the traditional 10 ml ARC spherical vessel but can also use the larger 130 ml vessel for low Phi or vent testing.

The Accelerating Rate Calorimeter 254 (ARC® 254) simultaneously measures temperature and pressure. The sealed pressure system also allows the user to evaluate the effect of different gas atmospheres on the thermal stability of the system.

Gaseous reaction products may be analyzed at the end of an experiment to help identify and understand the reaction mechanisms involved.