Applications
Carefully controlled roasting is often times an important initial process treatment for the subsequent leaching and recovery of most metal values. The Quinn laboratory furnace permits roasting of such materials at a designated temperature with a controlled input of desired atmosphere and with an off-gas which can be collected and analyzed.

Typical applications include (a) roasting of sulphides in oxidizing atmosphere for conversion to soluble sulphates, (b) roasting of sulphides in presence of reducing atmosphere to approach the metallic stage, (c) roasting of silicates in chloridizing roast to produce water soluble or volatile chlorides, (d) removal of organics by oxidizing roast.

Advantages
Rotating kiln is of Vycor to withstand temperature and corrosion. The internal surface is dimpled to lift and tumble the charge. The stationary ends of the kiln are sealed to the rotating kiln through spring-loaded ball joints to accommodate thermal expansion of the kiln. Variable speed drive provides flexibility to meet specific conditions.

The temperature inside the kiln is measured, controlled, and recorded.

The shell protecting the refractory is of 304 stainless steel as are the mechanisms which support the kiln.

Unit is conveniently mounted on a portable steel support table provided with rubber-tired casters.

(Dimensions and specifications on reverse side.)
QPEC Laboratory Rotary Kiln with temperature controller-recorder mounted on portable steel support stand

Specifications

**Shell:** 21" long x 15" wide x 14" high of SS 304 with east ceramic fiber insulation.

**Kiln:** Material is Vycor with built-in lifters.  
Size: Major diameter 3 inches; length of major diameter 10".  
Seals: Spring loaded ball joints.  
Supports: Adjustable SS 304 base and rods.  
Heating elements: Two 5.75" I.D. by 18" long, each rated 4460 watts for 230 volt operation.  
Maximum temperature range: To 1100° C.

**Drive Motor:** 1/15 hp AC/DC gearmotor with 3 to 100 rpm range for 1 ph, 50 or 60 cycle, 115 volt operation. **Drive:** Roller chain.

**Temperature controls:** Digital set point controller with deviation indicator, on-off switch and temperature recorder. Includes thermowell and thermocouple in furnace.

**Portable support stand:** Mild steel, epoxy painted with caster.

**Overall dimensions:** 48" high, 24" wide, and 44" long.

Note: Smaller and larger size units available.