

# Rotor-Gene Q(CA)



**Year of Purchase:**

**Cost:**

## Features

- Outstanding thermal and optical performance due to rotary format
- An unmatched optical range spanning UV to infrared wavelengths
- State-of-the art analyses supported by user-friendly software
- Low maintenance and maximum convenience due to robust design
- High performance in multiple applications with QIAGEN assays

## Performance

The Rotor-Gene Q is the only real-time cycler currently capable of deciphering the most difficult class IV SNPs by HRM. Harness the power of HRM using dedicated QIAGEN HRM Kits for applications such as genotyping, quantitative methylation analysis for data from the EpiTect HRM PCR Kit), gene scanning, and sequence matching. The Type-it HRM PCR Kit reliably and accurately detects gene mutations and SNPs. The EpiTect HRM PCR Kit enables fast screening and accurate detection of changes in CpG methylation status of bisulfite converted DNA.

## Principle

The unique centrifugal rotary design of the Rotor-Gene Q makes it the most precise and versatile real-time PCR cycler currently available. Each tube spins in a chamber of moving air, keeping all samples at precisely the same temperature during rapid thermal cycling. Detection is similarly uniform. When each tube aligns with the detection optics, the sample is illuminated and the fluorescent signal is rapidly collected from a single, short optical pathway. This thermal and optical uniformity results in sensitive, precise, and fast real-time PCR analysis. It also eliminates sample-to-sample variations and edge effects. These are unavoidable in traditional block-based instruments due to temperature gradients across the block and multiple, complex optical pathways.

## Specifications

Features	Specification
Protocols/main application on this instrument	Gene expression analysis, microRNA detection, Virus detection, SNP genotyping, SNP genotyping, High Resolution Melt analysis (HRM)
Heat dissipation/thermal load	Average, 0.183 kW (632 BTU/hour); Peak, 0.458 kW (1578 BTU/hour)
Weight	12.5 kg (27.6 lb.), standard configuration
Features	Dynamic range, 10 orders of magnitude
Transportation conditions	-25°C to 60°C (-13°F to 140°F)

Overvoltage category	II
Operating temperature	18-30°C (64-86°F)
Place of operation	For indoor use only
Storage conditions	15°C to 30°C (59°F to 86°F) in manufacturer's package; Max. 75% relative humidity (noncondensing); Environmental class 1K2 (IEC 60721-3-1)
Samples per run (throughput)	Tubes 0.2 ml; Strip Tubes 0.1 ml (4 tubes); Rotor-Disc 72
Typical run time	40 cycles in 45 min with the QIAGEN RG Kits (assay dependent)
Dimensions	Width, 37 cm (14.6 in.); Height, 28.6 cm (11.3 in.); Depth (without cables), 42 cm (16.5 in.); Depth (door open), 53.8 cm (21.2 in.)
Power	100–240 V AC, 50–60 Hz, <520 VA (peak); Power consumption <60 VA (standby); Mains supply voltage fluctuations are not to exceed 10% of the nominal supply voltages; F5a 250 V fuse
Kits designed for this instrument	artus QS-RGQ Kits (not available in all countries), RG SYBR Green PCR Kits; RG SYBR Green RT-PCR Kit; RG Probe PCR Kits; RG Probe RT-PCR Kit; RG Multiplex PCR Kit
Humidity	10–75% (noncondensing)
Thermal performance	Temperature range, 35 to 99°C; Temperature accuracy, ±0.5°C (type, measured 30 seconds after clock start); Temperature resolution, ±0.02°C (smallest programmable increment); Temperature uniformity, ±0.02°C; Ramp rate (peak ramp rates, air), >15°C/s heating, >20°C/s cooling
Pollution level	2; Environmental class 3K2 (IEC 60721-3-3)
Software	Rotor-Gene Q software, supplied on the installation CD provided
Optical System	Up to 6 channels spanning UV to infra-red wavelengths; Excitation sources: High energy light-emitting diodes; Detector: Photomultiplier; Acquisition time: 4 s. The software allows to create new excitation/detection wavelength combinations
Technology	Real-time PCR cycler
Altitude	Up to 2000 m (6500 ft)