

# QL40-XYCAL60 X-Y 4-Arm Caliper

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QL40-XYCAL60 is a 4-arm caliper probe with two independent pairs of mechanically linked arms. The arms accurately measure borehole diameters using the two sets of perpendicular arms. The probe provides accurate opposing diameter (180 degrees) measurements of the borehole wall, often referred to X and Y axis.

Typically used in an open hole environment, the probe measures 2-channel (XY) continuous borehole diameter. The probe can also be used in cased holes, water filled or air-filled holes. There are many applications; for example, the QL40-XYCAL60 probe can be used in large municipality water wells, mineral logging, and engineering applications. The probe can also locate cracks, fissures, and casing defects.

The QL40-XYCAL60 is supplied with two different sets of arms. The standard arms are suitable for a borehole diameters ranging from 10.16 cm to 101.6 cm (4 to 40 inches). Longer arms are suitable for borehole diameters up to 152.4 cm (60 inches). Caliper arms can be unscrewed from their short pivot arms and replaced with arms of different lengths. The caliper arms have a carbide wear tip that can be unscrewed and easily replaced.

The QL40-XYCAL60 is a bottom sub. It can be combined with other logging tools of the QL (Quick Link) product line or can be operated as a standalone tool.

## Application

- Large borehole diameter measurement
- Borehole volume calculation before borehole completion, cementation
- Fracture and cavity localization
- Rock integrity evaluation
- Often used in the implementation of environmental correction equations for other logs



## Operating conditions

Borehole Fluid	Casing	Centralization
<input checked="" type="checkbox"/> Water	<input checked="" type="checkbox"/> Uncased	<input type="checkbox"/> Required
<input checked="" type="checkbox"/> Mud	<input checked="" type="checkbox"/> PVC Borehole	<input checked="" type="checkbox"/> Not Necessary
<input checked="" type="checkbox"/> Dry	<input checked="" type="checkbox"/> Steel	

## Specifications

	Metric	Imperial
Diameter	54 mm	213 inches
Bullnose Diameter	88 mm	3.5 inches
Length	3.39 m	133.5 inches
Weight	34 kg	74 lbs.
Max. Temp.	70°C	158°F
Max. Pressure	200 bar	2900 psi

## Sensor

High precision potentiometer

### Small Arm Extension

Length: 10.2 cm (4 in.)

Calibrate between: 25.4 – 55.9 cm (10 – 22 in.)

### Medium Arm Extension

Length: 101.6 cm (40 in.)

Calibrate between: 25.4 – 109.2 cm (10 – 43 in.)

### Large Arm Extension

Length: 152.4 cm (60 in.)

Calibrate between: 25.4 – 152.4 cm (10 – 60 in.)

# Features & Benefits

- Calibrated measurement of borehole X and Y axis diameter in inches, centimeters, or millimeters
- Can be combined with other well logging tools of the QL product line or operated as a standalone tool
- Operates on any standard wireline (mono, 4 or 7 conductor, coax)
- Easy exchangeable caliper arm lengths and wear tips
- Very robust probe with strong caliper arm strength

# QL Stack Possibilities

- **PQL40-XYCAL60 + QL40-GR (Gamma)**  
Groundwater, Aquifer Location and Borehole Quality
- **QL40-XYCAL60 + QL40-SGR (Spectral Gamma)**  
Mineral Exploration, Clay Typing, Fracture Location
- **QL40-XYCAL60 + QL40-DEV-2G (Deviation)**  
Exploration, Borehole Volume and Rock Hardness, Borehole Trajectory
- **QL40-XYCAL60 + QL40-FTC-I (Inline Fluid Temperature and Conductivity)**  
Hydrogeologist's Tool, Groundwater Exploration and Assessment

