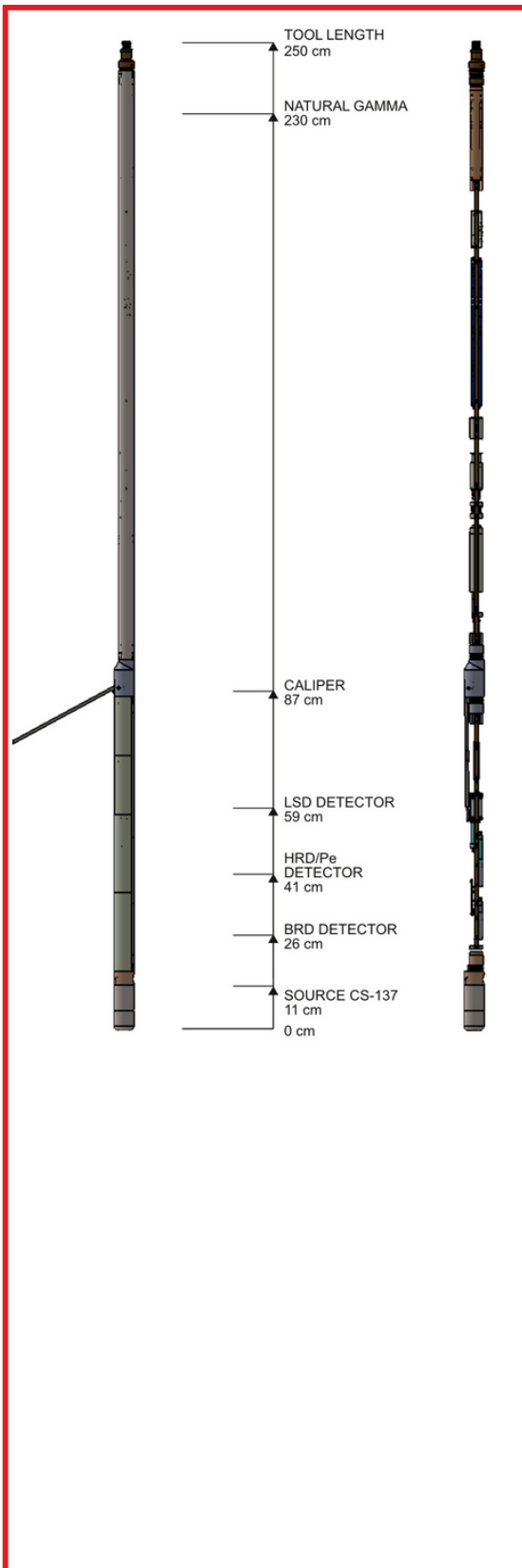


## Photo-electric density probe



The **PDGC50** probe provides a classic triple-spacing sidewall focussed formation density measurement, with the additional advantage of incorporating a photo-electric effect energy detection window on the medium-spacing detector.

The photoelectric effect (Pe) measurement is a reliable indication of the apparent formation atomic number, meaning that formation lithology and an accurate porosity can often be deduced directly from the results given by the probe. When the Pe log results are combined with those obtained from other probes (eg. spectral gamma) a considerable number of specific « heavy » minerals can be identified.

A gamma ray source (Cs137, typically 3.7 GBq), is fixed to the lower extremity of the probe during logging. The source capsule itself is supplied separately by a specialist partner.

The mechanical side-walling arm provides a caliper measurement, useful for diameter correction purposes and mud-cake evaluation, and a natural gamma log is also obtained by means of a scintillation detector located in the uppermost part of the probe body.

As an option, the probe can be supplied with calibration blocks for both density and photoelectric effect.

### Specifications

- ✓ Diameter: 50 mm
- ✓ Length: 2500 mm
- ✓ Weight: 20 kg
- ✓ Max. operating temperature : 70°C
- ✓ Max. operating pressure : 200 bar
- ✓ Power supply: 70 to 100 Vdc

### Data / sensor parameters

- ✓ Long-spacing density : 25 x 50 mm NaI(Tl) crystal
- ✓ Medium-spacing density + Pe : 10 x 50 mm NaI(Tl) crystal
- ✓ Bed resolution density : 10 x 25 mm NaI(Tl) crystal
- ✓ Caliper range: 50 to 450 mm
- ✓ Natural gamma detector: 25 x 50 mm NaI(Tl) crystal

### Accessories / options

- ✓ Workshop calibration blocks : plexiglass, aluminium, iron
- ✓ Caliper calibration jig

### Borehole conditions

- ✓ Open uncased borehole
- ✓ Dry or fluid-filled (preferred) borehole