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# Calibration and Reference Pads

**Magnetic Susceptibility Calibration Pads • Conductivity Reference Pads • IP/Resistivity Reference Pad**

Flat Susceptibility Pad with KT-10 v2

Flat Conductivity Pads

Curved Susceptibility Pad with KT-20 Console

Curved Conductivity Pads

IP/Resistivity Pad with KT-20 IP Sample Holder

A range of magnetic susceptibility calibration pads, conductivity reference pads, and an IP/resistivity reference pad are available for the KT-10 and/or KT-20 instruments. The purpose of the pads is to confirm that a KT-10 or KT-20 is operating within its specifications, ensuring the measurements are accurate and reliable. The calibration pads have the added benefit of being able to recalibrate a KT-10 or KT-20 with magnetic susceptibility activated. The magnetic susceptibility and conductivity pads come in flat and curved designs to accommodate instruments with different coil/sensor shapes, and with varying nominal values to confirm the instrument's accuracy within different ranges. Although the pads are designed for the KT-10 and KT-20 systems, they are also compatible with other instruments. Each magnetic susceptibility and conductivity pad is tested by an independent third-party and delivered with a test certificate confirming their nominal value and homogeneity.

## Magnetic Susceptibility Calibration Pads

The calibration pads are to recalibrate any KT-10 or KT-20 that is capable of measuring magnetic susceptibility. They also serve as a check source to confirm the instrument's measurements are accurate. The pads are available in flat and curved designs.

### Flat Pads

The flat calibration pads are for use with any magnetic susceptibility-enabled KT-10 coil or KT-20 sensor with a circular or rectangular shape. They are available with low and high nominal magnetic susceptibility values to confirm the instrument's operation in either range. The calibration pad with high nominal values is for use *only* with magnetic susceptibility meters with the Plus upgrade activated. Each pad is delivered in a leather case for protection.

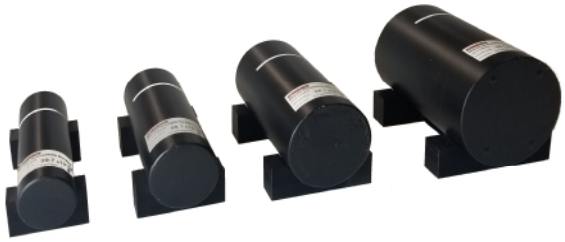
| | Nominal Magnetic Susceptibility Value [1] | Diameter | Height | Weight |
|---|---|---|---|---|
| **Low Range** | ~ 34 x $10^{-3}$ SI | 145 mm | 70 mm | 2.65 kg |
| **High Range** | ~ 2500 x $10^{-3}$ SI | 145 mm | 70 mm | 2.65 kg |

Low and High Range (left and right)
Flat Magnetic Susceptibility Calibration Pads

### Curved Pads

The curved magnetic susceptibility calibration pads are designed for use with the KT-20's 10 kHz curved sensors. The curved pads are shaped like drill core, with feet on the bottom for stabilization during use, and are available in BQ, NQ, HQ or PQ diameters.

| | Nominal Magnetic Susceptibility Value [1] | Diameter | Length | Weight |
|---|---|---|---|---|
| **BQ** | ~ 95 x $10^{-3}$ SI | 36.5 mm | 150 mm | 0.39 kg |
| **NQ** | ~ 95 x $10^{-3}$ SI | 47.6 mm | 150 mm | 0.61 kg |
| **HQ** | ~ 95 x $10^{-3}$ SI | 63.5 mm | 150 mm | 1.07 kg |
| **PQ** | ~ 95 x $10^{-3}$ SI | 85 mm | 150 mm | 1.91 kg |



BQ, NQ, HQ and PQ (left to right)
Curved Magnetic Susceptibility Calibration Pads

[1] *Nominal values indicated are approximate and will vary from pad to pad*

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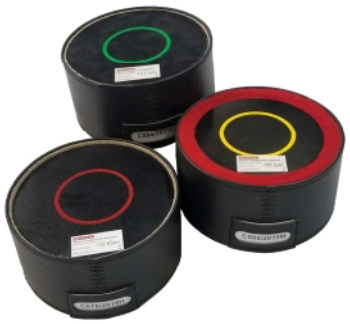
# Conductivity Reference Pads

The conductivity reference pads are check sources for any KT-10 or KT-20 that is capable of measuring conductivity. The pads are available in flat and curved designs. Every conductivity reference pad has their absolute values measured by two methods. The first is the contact measurement of the electrical resistivity of the pad based on the plazmochemical deposition of Ah on its top and bottom surfaces. The second method is the standard four-point contact method.

## Flat Pads

The flat conductivity reference pads are for use with any conductivity-enabled KT-10 coil or KT-20 sensor with a circular or rectangular shape. There are three different pads available in low, medium, and high nominal conductivity values to confirm the instrument's operation in each range. Each pad is delivered in a leather case for protection.

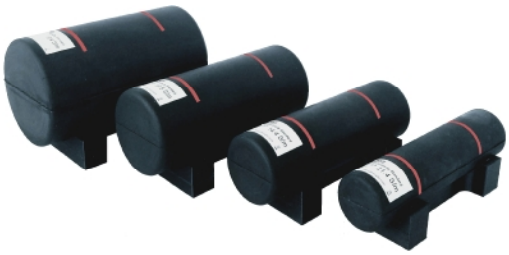


Low (red), Mid (yellow) and High (green) Range
Flat Conductivity Reference Pads

| | Nominal Conductivity Value [1] | Diameter | Height | Weight |
|---|---|---|---|---|
| **Low Range** | ~ 9 S/m | 152 mm | 50 mm | 1.2 kg |
| **Mid Range** | ~ 700 S/m | 128 mm | 50 mm | 1.0 kg |
| **High Range** | ~ 85,000 S/m | 152 mm | 50 mm | 1.8 kg |

## Curved Pads

The curved conductivity reference pads are designed for use with the KT-20's 100 kHz curved sensors. The curved pads are shaped like drill core, with feet on the bottom for stabilization during use, and are available in BQ, NQ, HQ or PQ diameters.



PQ, HQ, NQ, and BQ (left to right)
Curved Conductivity Reference Pads

| | Nominal Conductivity Value [1] | Diameter | Length | Weight |
|---|---|---|---|---|
| **BQ** | ~ 18 S/m | 36.5 mm | 150 mm | 0.23 kg |
| **NQ** | ~ 18 S/m | 47.6 mm | 150 mm | 0.37 kg |
| **HQ** | ~ 18 S/m | 63.5 mm | 150 mm | 0.64 kg |
| **PQ** | ~ 18 S/m | 85 mm | 150 mm | 1.14 kg |

# IP-T10 IP/Resistivity Reference Pad

The IP-T10 is a reference pad to verify the KT-20 IP/Resistivity Module's various measurement parameters. Its housing is shaped like a drill core and made from polished granite to minimize the influence of any surface contamination. The IP-T10 is compatible with both the small and large KT-20 IP sample holders. It is delivered with a factory test certificate, and conveniently stores inside the KT-20 IP sample holder's case.

IP-T10 Reference Pad

| | |
|---|---|
| **Dimensions** | 60 mm (length) x 70 mm (diameter) |
| **Weight** | 0.7 kg |

| Measurement Parameter | Unit of Measure | Nominal Value [1] |
|---|---|---|
| **MxFit** | mV/V | ~16.9 ± 0.4 |
| **MIP (Initial Chargeability)** | mV/V | ~ 97.8 ± 0.5 |
| **R (Contact Resistance)** | kΩ | ~ 99.7 ± 0.8 |
| **Total Tau (Time Constant)** | ms | ~ 236.9 ± 4 |
| **A x 102 (Amplitude)** | V/V | ~ 9.9 ± 0.1 |

[1] *Nominal values indicated are approximate and will vary from pad to pad*

*Specifications are subject to change without notice (May 14, 2020)*