Turnkey Instruments Ltd
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**Simply plug the pod into a Turnkey® instrument and it's ready for use...**

**iGASpod**

# Introducing the Turnkey® iGAS*pod*

The new iGASpod plugs into your iPM or iPM*plus* instrument to extend its measurement capability to include pollutant and toxic gases down to parts-per-billion (ppb) concentrations.

The iGASpod employs multiple, high-stability, 4-electrode electrochemical cells and an optional 10.6 eV photoionisation detector for volatile organic compounds (VOCs).

The signals from the electrochemical cells are analysed by proprietary electronics and software algorithm to give exceptional stability with a resolution down to 0.1 ppb. Full scale is typically 2000 ppb depending on gas species.

Matrix correction is applied to compensate for interfering gas species.

Use of state-of-the-art electronics means that, when at standby, the iGASpod draws only 20 microamps of current. Hence, it can be fitted with lithium manganese oxide coin cells to always keep the electrochemical cells biased. This means there is no switch-on delay while they stabilise. The internal battery lasts for 2 years, the same as the expected life of the electrochemical cells.

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There are two variants of the iGAS*pod*:

1. Fitted with up to four electrochemical cells to simultaneously measure up to four pollutant gases
2. Fitted with a Photoionisation Detector (PID) and up to three electrochemical cells

The PID has a 10.6 eV ultraviolet lamp. This can be operated continuously or, to conserve power and lamp life, intermittently. Expected lamp life is 5000 hours.

The iGASpod is factory calibrated. It memorises what gas species it is measuring and the respective sensor calibration, offsets and dates. All of this information is uploaded to the instrument when the measurements begin and is available on-line via www.airqweb.com or the Turnkey® AirQApp (for Android® or Apple®).

The iGAS*pod* is housed in an anodised aluminium enclosure measuring 65mm diameter by 25mm deep plus Bulgin 4-way IP65 connector.

| Gas Species | Resolution | Full Scale |
|---|---|---|
| Nitrogen dioxide | 0.1 ppb | 2000 ppb |
| Nitric oxide | 0.1 ppb | 2000 ppb |
| Ozone | 0.1 ppb | 2000 ppb |
| Volatile organics | 1 ppb | 5000 ppb |
| Carbon monoxide | 0.1 ppm | 1000 ppm |
| Hydrogen sulphide | 0.1 ppm | 1000 ppm |
| Sulphur dioxide | 0.1 ppm | 1000 ppm |

**Measurements can be made in volumetric (ppb) or mass (µg/m^3) units**

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