

Gas Dilution System



The Gas Dilution System (GDS) offers scientists and technicians the ability to perform “on-site” gas dilution in a small, inexpensive and easy to transport package.

- Gas output flow rates of 250 ml/min in 10% dilution steps or 500 ml/min in 1% dilution steps can be selected as required while the GDS is running
- Dilutes gas stream with ambient or bottled air
- Changes incoming gas standard or sample concentration from 100% to 1%
- Equilibrates the relative humidity of the diluted gas to close to ambient with its built-in Nafion® tubing for both source gas and dilution gas inputs
- Operates on 110 V, or rechargeable battery pack

Accuracy:

5 - 100% = +/-1%,

3 - 5% = +/-5%,

1 - 2 % = +/-10%

Part number 25-0008

Gas cylinder and regulator purchased separately

APP-TEK® GAS DILUTION SYSTEM SPECIFICATIONS

Output gas concentration as a percentage of input gas concentration	Low Flow: 0% to 100% in 10% steps High Flow: 0% to 100% in 1% steps	
Accuracy	Low Flow: $\pm 1.0\%$, i.e. if the setting is 20.0% the output will be $20.0 \pm 1.0\%$ High Flow: $\pm 1.0\%$, i.e. if the setting is 20.0% the output will be $20.0 \pm 1.0\%$	
Gas flow rates	Low Flow: 250 ± 15 ml/minute High Flow: 500 ± 25 ml/minute	
Suitable gases	<p>WARNING: the Gas Dilution System should not be used to dilute flammable gases with a concentration above 50% Lower Explosive Limit (LEL)</p> <p>The Gas Dilution System is not suitable for highly reactive gases and vapours.</p> <p>Suitable gases for dilution include Nitrogen, Oxygen, Carbon Monoxide, Carbon Dioxide, Methane (up to 50% LEL), and up to 100 ppm Hydrogen Sulphide.</p>	
Materials exposed to gas	<p>Pump head</p> <p>Pump diaphragm and valves</p> <p>Valve</p> <p>Tubing</p> <p>Dampener</p> <p>Source gas T-junction</p> <p>Gas Ports</p>	<p>PPS (Polyphenylene Sulphide) - Ryton® by Chevron Phillips Chemical</p> <p>EPDM (Ethylene/Propylene rubber)</p> <p>PPS (Polyphenylene Sulphide) - Ryton® by Chevron Phillips Chemical</p> <p>PBT (Polybutylene terephthalate) – Valox® by GE</p> <p>Silicone rubber seal</p> <p>Stainless Steel</p> <p>Viton® Fluoroelastomer by DuPont Dow</p> <p>Silicone rubber</p> <p>Nitrile</p> <p>Nylon</p> <p>UV stabilized Acetal</p>
Battery operating time	10h, output set to 50%, high flow rate, batteries fully charged. 15h, output set to 50%, low flow rate, batteries fully charged.	
External power supply requirements	12 Vdc regulated, 500 mA or higher. Centre pin positive (the Gas Dilution System is protected against accidental reversal of polarity)	
Operating temperature range	5 °C to 40 °C	
Dimensions	202 mm long x 159 mm wide x 32 mm high at front, 55 mm high at back (not including external charcoal filter)	
Weight	600 g	
Warranty	12 months	