**BACKGROUND:**
Laparoscopy is the examination of the interior of the body, usually the abdomen, using a laparoscope, a thin, fiber-optic tube with a lens at one end. A small incision is made in the abdomen and the laparoscope is inserted. The abdomen is then inflated with a gas to separate the organs to provide a better view of the interior.

**SOLUTION:**
AWM mass airflow sensors may be used to monitor inflation of the abdomen during laparoscopic surgeries. This sensor provides feedback to a valve for automatic control of the gas flow. Table 1 provides a comparison of the Honeywell AWM Series mass airflow sensors for use in this application.

**Table 1: Comparison of the Honeywell AWM Mass Airflow Sensors**

<table>
<thead>
<tr>
<th>AWM Sensor Series</th>
<th>Flow Type</th>
<th>Advantage</th>
<th>Disadvantage</th>
</tr>
</thead>
</table>
| AWM700 AWM5000    | Direct    | • Flow type provides simplest approach  
• Flow type provides an exact measurement of the total breath  
• Sensor provides best zero flow accuracy and null stability  
• Sensor is rated for overpressures up to 4 bar (60 psi)  
• Sensor is easily mounted without tubing due to its manifold mounting capability (face sealed with o-rings) | • Sensor is large |
| AWM40000          | Sampled   | • Sensor is small  
• Sensor is rated for overpressures up to 10 bar (150 psi) allowing it to be located anywhere in the system  
• Sensor is easily mounted without tubing due to its manifold mounting capability (face sealed with o-rings) | • System design is more complex because the customer must:  
- laminarize flow  
- design the bypass |
| AWM2000           | Sampled   | • Sensor has low cost  
• Sensor is rated for overpressures up to 1.5 bar (25 psi) | • System design is more complex because the customer must:  
- laminarize flow  
- design the bypass |

**BENEFIT:**
- The cost of using these sensors is lower than that of hotwire anemometers.

**CONTACT US**
For application assistance, current specifications or name of the nearest Authorized Distributor, check the Honeywell web site or call:
1-800-537-6945 USA  
1-800-737-3360 Canada  
1-815-235-6847 International  
FAX 1-815-235-6545 USA  
INTERNET
www.honeywell.com/sensing  
info.sc@honeywell.com