Report # EMC2010May20-1303

# ELECTROMAGNETIC COMPATIBILITY TEST REPORT

for the

# Fluke Biomedical VTMobile Gas Flow Analyzer


**The Fluke Biomedical VTMobile was tested to the following standards at the EMC laboratories of Fluke Corporation.**
**6920 Seaway Blvd Everett WA 98203**

## EN 61326-1:2006, EN61326-2-1:2006, CISPR 11:2004
## Class A Emissions and Immunity

The Fluke Biomedical VTMobile passes test requirements for equipment used for:

| | | |
|---|---|---|
| ☐ Industrial Locations | ☐ Controlled EM Environments | ☐ Portable Equipment |
| ▣ **Non-Domestic Use (Class A)** | ☐ Domestic Use (Class B) | |

*Class A equipment* is equipment suitable for use in all establishments other than domestic and those directly connected to a low voltage power supply network which supplies buildings used for domestic purposes.

**Prepared by:**
Gary Allen _____ Date: 19-May-2010
Test Engineer

**Approved by:**
Thomas Smith _____ Date: Jun 17, 2010
Test Engineer Sr.

# III. Test Results

The Fluke Biomedical VTMobile Gas Flow Analyzer was tested to the following Electromagnetic Compatibility [EMC] requirements:

Adapted from CISPR 11 Table 2a
**Emissions Limits for Class A Equipment**

| Port | Frequency MHz | Limits | Standard | Pass/Fail |
|---|---|---|---|---|
| Enclosure | 30 to 230 | 40dB (uV/m) quasi peak, measured at 10 meters. | CISPR 11 | Pass |
| | 230 to 1000 | 47dB (uV/m) quasi peak, measured at 10 meters. | | Pass |
| AC mains | 0.15 to 0.5 | 79dB (uV/m) quasi peak, 66dB (uV/m) average. | | Pass |
| | 0.5 to 5.0 | 73dB (uV/m) quasi peak, 60dB (uV/m) average. | | Pass |
| | 5 to 30 | 73dB (uV/m) quasi peak, 60dB (uV/m) average. | | Pass |

Adapted from EN 61326-1:2006 Table 1
**Basic immunity test requirements**

| Port | Phenomenon | Basic standard | Test value | Minimum Criteria | Pass/Fail |
|---|---|---|---|---|---|
| Enclosure | ESD | EN 61000-4-2 | 4 kV/4 kV contact/air | B | Pass |
| | EM Field | EN 61000-4-3 | 3 V/m (80 MHz to 1 GHz) | A | Pass |
| | EM Field | EN 61000-4-3 | 3 V/m (1,4 GHz to 2 GHz) | A | Pass |
| | EM Field | EN 61000-4-3 | 1 V/m (2,0 GHz to 2,7 GHz) | A | Pass |
| AC power (including protective earth) | Voltage dip | EN 61000-4-11 | 0 % during half cycle | B | Pass |
| | Voltage dip | EN 61000-4-11 | 0 % during 1 cycle | B | Pass |
| | Voltage dip | EN 61000-4-11 | 70 % during 25/30 [e] cycles | C | Pass |
| | Short interruptions | EN 61000-4-11 | 0 % during 250/300 [e] cycles | C | Pass |
| | Burst | EN 61000-4-4 | 1 kV (5/50 ns, 5 kHz) | B | Pass |
| | Surge | EN 61000-4-5 | 0,5 kV [a] /1 kV [b] | B | Pass |
| | Conducted RF | EN 61000-4-6 | 3 V (150 kHz to 80 MHz) | A | Pass |
| DC power [d] (including protective earth) | Burst | EN 61000-4-4 | 1 kV(5/50 ns, 5 kHz) | B | Pass |
| | Surge | EN 61000-4-5 | 0,5 kV [a] / 1 kV [b] | B | Pass |
| | Conducted RF | EN 61000-4-6 | 3 V (150 kHz to 80 MHz) | A | Pass |
| I/O signal/ control (including lines connected to functional earth port) | Burst | EN 61000-4-4 | 0,5 kV [d] (5/50 ns, 5 kHz) | B | Pass |
| | Surge | EN 61000-4-5 | 1 kV [b], [c] | B | Pass |
| | Conducted RF | EN 61000-4-6 | 3 V [d] (150 kHz to 80 MHz) | A | Pass |
| I/O signal/ control connected directly to mains supply | Burst | EN 61000-4-4 | 1 kV(5/50 ns, 5 kHz) | B | Pass |
| | Surge | EN 61000-4-5 | 0,5 kV [a] / 1 kV [b] | B | Pass |
| | Conducted RF | EN 61000-4-6 | 3 V (150 kHz to 80 MHz) | A | Pass |

a) Line to line.
b) Line to earth (ground).
c) Only in the case of long-distance lines (see 3.6).
d) Only in the case of lines > 3 m.
e) "25/30 cycles" means "25 cycles for 50 Hz test" and "30 cycles for 60 Hz test".