# Manual Supplement

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| Manual Title: | VT650/VT900A Users | Supplement Issue: | **1** |
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| Revision/Date: | 3 | | |

This supplement contains information necessary to ensure the accuracy of the above manual.



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| Supplement Issue # | Summary of Changes |
|---|---|
| 1 | 1. A note has been added recommending a warmup period of 1 hour for air flow measurement accuracy and stability.<br>2. Helium and Heliox accuracy specification has been removed.<br>3. CO2 accuracy specification has been removed |

# Change #1, TM-1007

On page 36, replace Table 10 with the following:

| Gas Type | Description |
|---|---|
| Air | Standard room air. |
| N2 | 100 % Nitrogen |
| N2O | 100 % Nitrous Oxide |
| CO2[2] | 100 % Carbon Dioxide |
| O2 | 100 % Oxygen |
| Ar | 100 % Argon |
| Heliox[2] | 21 % Oxygen, and 79% Helium |
| O2 bal N2O mix[1] | Measured Oxygen, balance Nitrous Oxide |
| O2 bal He mix[1] [2] | Measured Oxygen, balance Helium |
| O2 bal N2 mix[1] | Measured Oxygen, balance Nitrogen |
| [1] For these gases, the oxygen concentration is measured using the oxygen sensor in the airflow channel. The balance is the other gas. These gases can only be measured in the airflow channel, not available in the ultra-low-flow channel of the VT900A.<br>[2] Accuracy not specified. | |

On page 48, replace Table 14 with:

**Table 14. Airway Flow Range and Accuracy**

| Gas | Range | Specification |
|---|---|---|
| Main Airway Flow | | |
| Air, Nitrogen (N2), Oxygen (O2) | 0 to ± 200 slpm | ± 2.0 % of rdg or 0.04 slpm[1] |
| | 200 to 300 slpm<br>-200 to -300 slpm | ± 2.5 % of rdg |
| Argon, O2 bal N2 | ±300 slpm | 3.0 % of rdg or 0.08 slpm, typical |
| Nitrous Oxide (N2O), O2 bal N20 | ±150 slpm | 3.0 % of rdg or 0.08 slpm, typical |
| Ultra-low Flow (VT900A) | | |
| Air, Nitrogen (N2), Oxygen (O2) | ±0.750 slpm | 1.7 % of rdg or 0.01 slpm |
| Argon | ±0.750 slpm | 3.0 % of rdg or 0.02 slpm, typical |
| Nitrous Oxide (N2O) | ±0.400 slpm | 3.0 % of rdg or 0.02 slpm, typical |

*Notes:*

- *Ultra-low flow that is over range can be detected as unstable. If this occurs, reduce flow.*
- *Flow specifications are with laminar flow input.*
- *A one-hour warm-up is recommended for maximum measurement accuracy and stability. Flow rate sensors are subject to offset drift during the warm-up period.*

[1] ± 2.5% of rdg (-22 to -14 slpm, +7.5 to +9.5 slpm)

On Page 49, Replace the Gas Type section with the following:

Gas types
Air, Nitrogen (N2), Nitrous Oxide (N2O), Carbon Dioxide (CO2)[1], Oxygen (O2), Argon, Heliox[1] (21 % O2, 79 %He[1]), Oxygen/ Nitrogen, Oxygen/Nitrous Oxide, Oxygen/Helium[1]

[1] *Accuracy not specified.*